



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

GENERAL LIBRARY
OF
UNIVERSITY OF MICHIGAN

PRESENTED BY

Mass. Bureau of Statistics
of Labor Dec 29 1895

4

74

Hc

107

107

107

THE

79383

ANNUAL STATISTICS

OF

MANUFACTURES.

—
1897.
—

TWELFTH REPORT.

—
BOSTON:
WRIGHT & POTTER PRINTING CO., STATE PRINTERS,
18 POST OFFICE SQUARE.
1898.



Commonwealth of Massachusetts.

BUREAU OF STATISTICS OF LABOR,
CLAPLIN BUILDING, 20 BEACON STREET,
BOSTON, JUNE 30, 1898.

TO THE HONORABLE SENATE AND HOUSE OF REPRESENTATIVES:

I have the honor to transmit, herewith, the Annual Statistics of Manufactures for the year 1897, which have been collected and are presented in compliance with Chapter 174, Acts of 1886.

Very respectfully,

HORACE G. WADLIN,
Chief.

[iii]

TABLE OF CONTENTS.

	Page
Letter of Transmittal, ...	iii
INTRODUCTION, ...	xiii-xv
Reason for the delay in publication, ...	xiii
Value of goods made and work done for nine leading industries and All Industries. 1895, 1896, 1897, ...	xiii, xiv
Rates of increase shown in annual reports a basis for trustworthy estimates for the inter-censal years, ...	xiv

STATISTICS OF MANUFACTURES.

PRIVATE FIRMS AND CORPORATIONS; PARTNERS AND STOCK-HOLDERS: BY INDUSTRIES, ...	3-12
For the year 1896, ...	4-7
For the year 1897, ...	8-11
CAPITAL INVESTED: BY INDUSTRIES, ...	13-16
Capital invested: by industries. 1896, 1897, ...	14, 15
STOCK USED: BY INDUSTRIES, ...	17-20
Stock used: by industries. 1896, 1897, ...	18, 19
GOODS MADE: BY INDUSTRIES, ...	21-24
Goods made: by industries. 1896, 1897, ...	22, 23
PERSONS EMPLOYED: BY INDUSTRIES, ...	25-64
Smallest, greatest, and average number of persons employed, ...	27-34
Aggregates. 1896, ...	27, 28
Aggregates. 1897, ...	29, 30
Averages. 1896, ...	31, 32
Averages. 1897, ...	33, 34
Range of employment and unemployment. 1896, 1897, ...	35, 36
Aggregates: by months. 1896, 1897, ...	37-63
WAGES PAID: BY INDUSTRIES, ...	65-98
Wages paid: by industries. 1896, 1897, ...	67, 68
Average yearly earnings: by industries. 1896, 1897, ...	69, 70
Classified weekly earnings: by industries. 1896, 1897, ...	71-97

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION:		Page
BY INDUSTRIES, ...		99-104
Proportion of business done: by industries 1896, 1897, ...		100, 101
Days in operation: by industries. 1896, 1897, ...		102, 103

SELECTED INDUSTRY PRESENTATIONS.

Notes explanatory of tables in each industry presentation, ...	106, 107
Boots and Shoes, ...	108-110
Carpetings, ...	110-112
Carriages and Wagons, ...	113-115
Clothing, ...	115-117
Cotton Goods, ...	118-120
Food Preparations, ...	120-122
Furniture, ...	123-125
Hosiery and Knit Goods, ...	125-127
Leather, ...	128-130
Machines and Machinery, ...	130-132
Metals and Metallic Goods, ...	133-135
Musical Instruments and Materials, ...	135-137
Paper, ...	138-140
Woollen Goods, ...	140-142
Worsted Goods, ...	143-145
All Industries, ...	145-147

ANALYSIS.

Basis of comparisons, ...	151
The percentages may be accepted as indicating the rate of increase or decrease for the State, ...	151
Numerical aggregates not given for all establishments, ...	151
Meaning of the term "All Industries,"	151, 152

PRIVATE FIRMS AND CORPORATIONS; PARTNERS AND STOCK-

HOLDERS: BY INDUSTRIES, ...	152-156
Duplications in private firms, partners, etc., ...	152-154
Comparison of duplications, ...	153
Meaning of the word "establishment,"	153
Comparison. Private firms and corporations, ...	154
Comparison. Partners. Males, females, etc., ...	154, 155
Comparison. Stockholders. Males, females, etc., ...	155
Comparison. Average number of partners to a private firm and average number of stockholders to a corporation, ...	155, 156
Summary of private firms, corporations, partners, and stockholders. 1897, ...	156

CAPITAL INVESTED: BY INDUSTRIES, ...	156-161
Industries which show an increase in 1897, ...	156, 157
Industries which show a decrease in 1897, ...	157
Comparison for nine leading industries. 1896, 1897, ...	157, 158

CAPITAL INVESTED: BY INDUSTRIES — Con.

	Page
Caution against unwarranted use of figures relative to capital,	158, 159
The method of returning capital in early censuses,	159
The present accepted method of obtaining returns of capital,	160, 161

STOCK USED: BY INDUSTRIES,	161-163
The meaning of the term "stock used,"	161
Industries which show an increase in 1897,	161, 162
Industries which show a decrease in 1897,	162
Comparison for nine leading industries. 1896, 1897,	162, 163

GOODS MADE: BY INDUSTRIES,	163-166
Industries which show an increase in 1897,	163, 164
Industries which show a decrease in 1897,	164
Comparison for nine leading industries. 1896, 1897,	164, 165
Comparison of increase or decrease in value of goods made and work done. 1886-1897,	165, 166
Increase or decrease in establishments does not necessarily mean an increase or decrease in value of product,	166

PERSONS EMPLOYED: BY INDUSTRIES,	166-172
Comparison for nine leading industries. Average number of persons employed. 1896, 1897,	166, 167
Comparison for nine leading industries. Smallest number of persons employed. 1896, 1897,	167, 168
Comparison for nine leading industries. Greatest number of persons employed. 1896, 1897,	168
Percentages of employment and unemployment since 1886,	168-170
Average number of persons employed: by months,	170, 171
Percentages of employment and unemployment: by months,	171, 172

WAGES PAID: BY INDUSTRIES,	172-176
Wages paid. Comparison for nine leading industries. 1896, 1897,	173, 174
Average yearly earnings. Comparison for nine leading industries. 1896, 1897,	174, 175
Classified weekly earnings. Percentages of males and females. All Industries. 1896, 1897,	175, 176
Fluctuations in the different classes of earnings,	176

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION:	
BY INDUSTRIES,	176-178
Proportion of business done. Comparison for nine leading industries. 1896, 1897,	177
Days in operation. Comparison for nine leading industries. 1896, 1897,	177, 178

	Page
SUMMARY, ...	178-199
Industries which show an increase in average number of days in operation and in average proportion of business done, ...	179, 180
Industries which show an increase in average number of days in operation and a decrease in average proportion of business done, ...	181, 182
Industries which show a decrease in average number of days in operation but a greater average proportion of business done, ...	182
Industries which show a decrease in average number of days in operation and in average proportion of business done, ...	182-184
Comparison. Increase or decrease in capital, product, wages, and average number of persons employed, ...	184-187
General summary of All Industries. 1896, 1897, ...	187-189
Productive capacity of employes and capital; percentages of industry product paid in wages and percentages devoted to other expenses. 1897, ...	188-190
Explanation of terms "industry product" and "profit and minor expense fund,"	188, 189
Rank of nine leading industries as regards amount of industry product per \$1,000 of capital. 1896, 1897, ...	191
Rank of nine leading industries as regards average product per employé. 1896, 1897, ...	191
Rank of nine leading industries as regards percentages of industry product paid in wages. 1896, 1897, ...	191, 192
Comparisons for nine leading industries. 1896, 1897, ...	192-197
Boots and Shoes, ...	192, 193
Carpetings, ...	193
Cotton Goods, ...	193, 194
Leather, ...	194
Machines and Machinery, ...	194, 195
Metals and Metallic Goods, ...	195
Paper, ...	195, 196
Woollen Goods, ...	196
Worsted Goods, ...	196, 197
Condensed general statement regarding the years 1896 and 1897, ...	197-199
Capital invested, ...	197, 198
Stock used, ...	198
Goods made, ...	198
Persons employed, ...	198, 199
Wages paid, ...	199
Proportion of business done, ...	199

INDUSTRIAL CHRONOLOGY. 1897.

	Page		Page
Abington, ...	203	CHELSEA, ...	212
Acton, ...	203	Cheshire, ...	212
Adams, ...	203	Chester, ...	212
Agawam, ...	203	Chesterfield, ...	212
Amesbury, ...	203	CHICOPEE, ...	212
Amherst, ...	203	Clarksburg, ...	212
Andover, ...	203, 204	Clinton, ...	213
Ashburnham, ...	204	Colrain, ...	213
Ashby, ...	204	Concord, ...	213
Ashland, ...	204	Conway, ...	213
Athol, ...	204	Cummington, ...	213
Attleborough, ...	204		
Avon, ...	204	Dalton, ...	213
Ayer, ...	204	Danvers, ...	213
		Dedham, ...	213
Barnstable, ...	204	Dighton, ...	213
Barre, ...	204	Douglas, ...	213, 214
Becket, ...	204	Dover, ...	214
Bellingham, ...	204, 205	Dracut, ...	214
Belmont, ...	205	Dudley, ...	214
Bernardston, ...	205		
BEVERLY, ...	205	East Bridgewater, ...	214
Billerica, ...	205	Easthampton, ...	214
Blackstone, ...	205	Easton, ...	214
BOSTON, ...	205-208	Enfield, ...	214
City Proper, ...	205-207	Erving, ...	214
Brighton, ...	207	Essex, ...	214
Charlestown, ...	207	EVERETT, ...	214
Dorchester, ...	207		
East Boston, ...	207	FALL RIVER, ...	214-217
Jamaica Plain, ...	207	Falmouth, ...	217
Mattapan, ...	207	FITCHBURG, ...	217
Roxbury, ...	207, 208	Foxborough, ...	217
South Boston, ...	208	Framingham, ...	217
Bourne, ...	208	Franklin, ...	217, 218
Braintree, ...	208		
Bridgewater, ...	208	Gardner, ...	218
BROCKTON, ...	208-210	Georgetown, ...	218
Brookfield, ...	211	GLOUCESTER, ...	218
Brookline, ...	211	Grafton, ...	218
		Granville, ...	218
CAMBRIDGE, ...	211	Great Barrington, ...	218
Canton, ...	211, 212	Greenfield, ...	219
Charlton, ...	212	Groveland, ...	219
Chelmsford, ...	212		

INDUSTRIAL CHRONOLOGY. 1897 — Continued.

	Page		Page
Hampden, ...	219	Methuen, ...	229
Hanover, ...	219	Middleborough, ...	229
Hanson, ...	219	Milford, ...	229, 230
Hardwick, ...	219	Millbury, ...	230
Harvard, ...	219	Millis, ...	230
HAVERHILL, ...	219-221	Milton, ...	230
Hingham, ...	221	Monroe, ...	230
Hinsdale, ...	221	Monson, ...	230
Holbrook, ...	221	Montague, ...	230
Holden, ...	221		
Holliston, ...	221	Nantucket, ...	230
HOLYOKE, ...	221, 222	Natick, ...	230, 231
Hopedale, ...	222	Needham, ...	231
Hopkinton, ...	222	NEW BEDFORD, ...	231
Hubbardston, ...	222	Newbury, ...	231, 232
Hudson, ...	222, 223	NEWBURYPORT, ...	232
Huntington, ...	223	New Salem, ...	232
Hyde Park, ...	223	NEWTON, ...	232
		Norfolk, ...	232
Ipswich, ...	223	NORTH ADAMS, ...	232, 233
		NORTHAMPTON, ...	233
Lakeville, ...	223	North Andover, ...	233
Lancaster, ...	223	North Attleborough, ...	233
Lanesborough, ...	223	Northborough, ...	233
LAWRENCE, ...	223, 224	Northbridge, ...	233
Lee, ...	224	Northfield, ...	233
Leicester, ...	224	Norton, ...	233
Lenox, ...	224	Norwood, ...	233
Leominster, ...	224, 225		
Lexington, ...	225	Orange, ...	234
Longmeadow, ...	225	Orleans, ...	234
LOWELL, ...	225, 226	Otis, ...	234
Ludlow, ...	226	Oxford, ...	234
LYNN, ...	226-228		
Lynnfield, ...	228	Palmer, ...	234
		Peabody, ...	234
MALDEN, ...	228	Pepperell, ...	234
Manchester, ...	228	PITTSFIELD, ...	234, 235
Mansfield, ...	228	Plymouth, ...	235
Marblehead, ...	228		
MARLBOROUGH, ...	228, 229	QUINCY, ...	235
Marshfield, ...	229		
MEDFORD, ...	229	Randolph, ...	235
Medway, ...	229	Reading, ...	235, 236
Melrose, ...	229	Revere, ...	236
Mendon, ...	229	Richmond, ...	236
Merrimac, ...	229	Rockland, ...	236

INDUSTRIAL CHRONOLOGY. 1897 — Concluded.

	Page		Page
Rockport, ...	236	Upton, ...	241
Rowe, ...	236	Uxbridge, ...	241
Rowley, ...	236	Wakefield, ...	241
Royalston, ...	236	Wales, ...	241
Russell, ...	236	Walpole, ...	241
Rutland, ...	236	WALTHAM, ...	241, 242
SALEM, ...	236, 237	Ware, ...	242
Saugus, ...	237	Wareham, ...	242
Scituate, ...	237	Warren, ...	242
Sharon, ...	237	Watertown, ...	242
Sheffield, ...	237	Wayland, ...	242
Shelburne, ...	237	Webster, ...	242, 243
Shirley, ...	237	Wellesley, ...	243
Shrewsbury, ...	237	Wendell, ...	243
Somerset, ...	237	Westborough, ...	243
SOMERVILLE, ...	237, 238	West Boylston, ...	243
Southborough, ...	238	West Brookfield, ...	243
Southbridge, ...	238	Westfield, ...	243
South Hadley, ...	238	Westford, ...	243
Spencer, ...	238	Westminster, ...	243
SPRINGFIELD, ...	238, 239	West Newbury, ...	243
Sterling, ...	239	Weston, ...	244
Stockbridge, ...	239	West Springfield, ...	244
Stoneham, ...	239	West Stockbridge, ...	244
Stoughton, ...	239, 240	Weymouth, ...	244
Stow, ...	240	Whitman, ...	244
Sturbridge, ...	240	Williamsburg, ...	244
Sutton, ...	240	Williamstown, ...	244
Swampscott, ...	240	Winchendon, ...	244
TAUNTON, ...	240	Winchester, ...	244, 245
Templeton, ...	240	Winthrop, ...	245
Topsfield, ...	240	WOBURN, ...	245
Townsend, ...	240	WORCESTER, ...	245, 246
Tyngsborough, ...	241	Wrentham, ...	246
		THE STATE, ...	246-249



THE
ANNUAL STATISTICS OF MANUFACTURES.

1897.

INTRODUCTION.

The present is the twelfth report on the Annual Statistics of Manufactures, issued in accordance with the provisions of Chapter 174 of the Acts of 1886.

The publication of this volume as well as that of the issue which preceded it has been delayed on account of the pressure of unusual work in the Department due to the tabulation of the returns of the Decennial Census of the Commonwealth. All branches of work in the office must necessarily be carried on simultaneously. The work upon the Census is now practically completed however, and future reports in this series will not be affected by it.

In the main, the tables contained in this volume present comparisons between the returns of two successive years, namely, 1896 and 1897, obtained from identical establishments in each year; the increase or decrease in the different elements in the industries specified, in the later year, being thus measured by means of consecutive returns prepared upon exactly the same basis.

In order to permit a comparison of total output in the leading industries and in All Industries, for the Census Year, 1895, and an estimated product for the years 1896 and 1897 the following table is introduced:

INDUSTRIES.	VALUE OF GOODS MADE AND WORK DONE		
	1895	1896	1897
Boots and shoes, ...	\$122,135,081	\$119,423,682	\$127,317,587
Carpetings, ...	7,447,115	5,857,901	6,274,984
Cotton goods, ...	93,615,560	91,081,771	90,877,017
Leather, ...	25,694,407	21,860,801	25,472,205
Machines and machinery, ...	33,492,848	36,661,271	32,412,230
Metals and metallic goods, ...	40,297,899	38,633,596	37,609,806
Paper and paper goods, ...	27,955,024	25,738,191	25,825,701
Woollen goods, ...	29,370,963	23,194,249	28,429,191
Worsted goods, ...	20,975,996	18,152,627	24,547,797
ALL INDUSTRIES, ...	\$849,807,302	\$802,982,920	\$827,393,601

The values for the year 1895 contained in the preceding table are taken from the Census returns made in that year covering all the establishments in the Commonwealth. The values for 1896 and 1897 are estimated in accordance with the percentage rates of increase or decrease shown in the reports of Annual Statistics for the year 1896 as compared with 1895, and for 1897 as compared with 1896; experience having shown that these rates of increase or decrease derived from the establishments which make returns for the annual comparison may be fairly used as a basis for trustworthy estimates for the intercensal years.

The returns made to this Department in 1896 and 1897 indicate plainly, that as compared with 1895, the year 1896 was in nearly every industry a year of greater depression, although as compared with years of normal industrial prosperity 1895 itself was below the level. Among those shown in the table, the industry classed as Machines and Machinery furnishes an exception to this general statement. In 1897 as compared with 1896, however, this industry, and also Cotton Goods and Metals and Metallic Goods, shows depression. Boots and Shoes, Carpetings, Leather, Paper and Paper Goods, Woollen Goods, and Worsted Goods, show recovery from the low level of 1896, and in the case of Boots and Shoes and Worsted Goods the estimated output is larger than in 1895.

As to All Industries in the aggregate the estimated output for 1896 drops below that for 1895 but recovers to a somewhat higher level in 1897.

The executive direction of the clerks directly engaged upon the preparation of this volume has devolved upon Mr. Frank H. Drown, Second Clerk of the Bureau. His experience in this department renders his services especially valuable and I take pleasure in acknowledging them here. I wish also to thank Mr. Charles F. Pidgin, Chief Clerk, for his continued co-operation and assistance.

H. G. W.

STATISTICS OF MANUFACTURES.

1897.



**PRIVATE FIRMS AND CORPORATIONS;
PARTNERS AND STOCKHOLDERS:
BY INDUSTRIES.**

PRIVATE FIRMS AND CORPORATIONS; PARTNERS AND STOCKHOLDERS: BY INDUSTRIES.

1896.

[This presentation shows the number of partners and stockholders engaged in the management of the various manufacturing industries. The partners are divided into males, females, special, and estates. The stockholders are designated by an asterisk (*) following the title of the industry (see Boots and Shoes). They are caused to be included in the same town; sometimes in the same industry in different towns; and has been to consider each establishment as one (whether managed in connection with another or not) in making up the total for "All Industries," to omit the duplications. Stockholders of certain establishments have extensive investments of capital outside this Commonwealth, are not included in the present association, in connection with such merely branch establishments, incidental only to the

	INDUSTRIES.	Number of Estab- lishments Considered	Number of Private Firms	PARTNERS	
				Males	Females
1	Agricultural implements, ...	9	4	6	-
2	Arms and ammunition, ...	12	8	11	1
3	Artisans' tools, ...	72	52	74	1
4	Awnings, sails, tents, etc., ...	38	38	49	1
5	Bicycles, tricycles, etc., ...	14	2	3	-
6	Boots and shoes,*	675	612	998	18
7	Boxes, barrels, kegs, etc.,*	119	107	149	-
8	Boxes (paper) and paper goods, ...	86	64	85	3
9	Brick, tiles, and sewer pipe,*	61	49	80	4
10	Brooms, brushes, and mops, ...	21	18	27	-
11	Building materials, ...	28	24	33	-
12	Burial cases, caskets, coffins, etc., ...	8	6	12	-
13	Buttons and dress trimmings,*	14	6	8	4
14	Carpetings, ...	12	6	8	-
15	Carriages and wagons,*	136	126	182	1
16	Cement, kaolin, lime, and plaster, ...	9	7	13	-
17	Chemical preparations (compounded), ...	13	8	11	2
18	Clocks, watches, and jewelry, ...	106	99	184	10
19	Clothing, ...	155	132	224	7
20	Cooking, lighting, and heating apparatus,*	39	22	29	1
21	Cordage and twine,*	27	15	21	2
22	Cotton goods,*	163	35	53	7
23	Crayons, pencils, crucibles, etc., ...	3	2	3	-
24	Drugs and medicines, ...	24	15	22	-
25	Dyestuffs, ...	6	3	5	-
26	Earthen, plaster, and stone ware, ...	7	7	9	-
27	Electrical apparatus and appliances, ...	20	7	12	-
28	Electroplating, ...	12	12	16	-
29	Emery and sand paper and cloth, etc., ...	9	1	1	-
30	Fancy articles, etc., ...	20	15	20	-
31	Fertilizers, ...	3	3	5	-
32	Fine arts and taxidermy, ...	3	2	3	-

PRIVATE FIRMS AND CORPORATIONS; PARTNERS AND STOCKHOLDERS: BY INDUSTRIES.

1897.

ment of the 4,695 establishments which enter into the comparison for the years 1896 and 1897. nated as males, females, and banks, trustees, etc.; while in the last column of the presentation devoted to private firms, partners, corporations, and stockholders. These duplications are indy by the fact that the same firm or corporation is often engaged in manufacturing in two or more sometimes in more than one industry in the same town or in different towns. The plan adopted not), and to credit the whole number of partners and stockholders to each industry, but, in makments which are operated by railroad companies, or by syndicates or associations, many of which entation; since to include all the stockholders of a railroad company, or of a syndicate or simmain business of the corporation, would result in abnormally increasing the aggregate.

PARTNERS			Number of Corpora- tions	STOCKHOLDERS				AGGREGATES: Partners and Stockholders	
Special	Estates	Totals		Males	Females	Banks, Trustees, etc.	Totals		
-	-	6	5	48	21	16	85	91	1
-	1	13	4	36	8	2	41	54	2
-	-	78	20	482	279	90	851	929	3
-	-	48	-	-	-	-	-	48	4
-	-	3	12	172	48	31	251	254	5
15	4	1,006	71	640	160	30	830	1,836	6
-	-	150	12	84	29	11	124	274	7
1	1	94	22	179	18	1	198	292	8
-	1	79	14	195	96	31	322	401	9
-	1	26	3	19	20	6	45	71	10
-	-	31	4	16	2	1	19	50	11
-	-	12	2	56	10	8	74	86	12
-	-	8	9	69	19	4	92	100	13
-	-	6	8	419	377	180	976	982	14
1	5	189	9	51	14	5	70	259	15
-	-	13	2	8	-	2	10	23	16
-	-	12	5	42	13	5	60	72	17
2	1	179	9	68	28	10	106	285	18
2	1	231	24	288	118	23	429	660	19
1	1	29	19	178	64	17	259	288	20
2	-	25	12	331	249	16	596	621	21
-	3	62	128	10,216	8,455	3,018	21,689	21,751	22
-	-	1	2	13	2	-	15	16	23
-	1	21	9	77	35	4	116	137	24
-	-	6	3	40	11	7	58	64	25
-	-	9	-	-	-	-	-	9	26
-	-	12	13	340	63	19	422	434	27
-	-	15	-	-	-	-	-	15	28
-	-	1	8	81	17	7	105	106	29
-	-	20	5	35	10	-	45	65	30
-	-	4	-	-	-	-	-	4	31
-	-	2	1	1	6	-	7	9	32

1 Includes one syndicate.

PRIVATE FIRMS, PARTNERS, ETC.: BY INDUSTRIES—1897
— Concluded.

	INDUSTRIES.	Number of Estab- lishments Considered	Number of Private Firms	PARTNERS	
				Males	Females
1	Fireworks and matches, ...	4	2	4	—
2	Flax, hemp, jute, and linen goods, ...	8	4	10	—
3	Food preparations,*	336	290	393	6
4	Furniture,*	132	114	176	8
5	Glass, ...	14	12	22	1
6	Glue, isinglass, and starch, ...	* 20	13	22	1
7	Hair work (animal and human), ...	6	6	3	2
8	Hose: rubber, linen, etc., ...	5	4	5	—
9	Hosiery and knit goods,*	38	22	35	2
10	Ink, muclage, and paste, ...	8	7	9	—
11	Ivory, bone, shell, and horn goods, etc., ...	16	15	24	—
12	Leather,*	126	106	174	1
13	Liquors and beverages (not spirituous), ...	20	18	20	2
14	Liquors: malt, distilled, and fermented, ...	58	30	48	5
15	Lumber,*	34	29	39	4
16	Machines and machinery,*	360	239	342	13
17	Metals and metallic goods,*	384	270	379	11
18	Mixed textiles, ...	12	5	7	—
19	Models, lasts, and patterns,*	44	40	62	2
20	Musical instruments and materials, ...	64	41	61	2
21	Oils and illuminating fluids, ...	8	6	7	—
22	Paints, colors, and crude chemicals, ...	23	15	30	—
23	Paper,*	91	25	54	—
24	Perfumes, toilet articles, etc., ...	5	3	3	—
25	Photographs and photographic materials, ...	25	21	24	1
26	Polishes and dressing, ...	28	23	41	1
27	Printing, publishing, and bookbinding, ...	55	35	58	3
28	Print works, dye works, and bleacheries,*	49	31	41	3
29	Railroad construction and equipment,*	15	2	2	—
30	Rubber and elastic goods,*	41	19	30	3
31	Saddlery and harness, ...	36	33	40	—
32	Scientific instruments and appliances, ...	20	15	23	—
33	Shipbuilding, ...	47	43	55	—
34	Silk and silk goods, ...	9	4	5	—
35	Sporting and athletic goods, ...	5	4	5	—
36	Stone,*	202	184	284	8
37	Straw and palm leaf goods, ...	16	14	30	—
38	Tallow, candles, soap, and grease, ...	64	56	73	—
39	Tobacco, snuff, and cigars, ...	58	48	68	2
40	Toys and games (children's), ...	9	7	10	2
41	Trunks and valises, ...	7	7	10	—
42	Whips, lashes, and stocks, ...	14	9	14	2
43	Wooden goods, ...	107	89	126	3
44	Woollen goods,*	117	73	116	6
45	Worsted goods,*	31	15	29	1
46	ALL INDUSTRIES, ...	4,695	3,522	5,286	143

PRIVATE FIRMS, PARTNERS, ETC.: BY INDUSTRIES — 1897
— Concluded.

PARTNERS			Number of Corpora- tions	STOCKHOLDERS				AGGREGATES: Partners and Stockholders	
Special	Estates	Totals		Males	Females	Banks, Trustees, etc.	Totals		
-	-	4	12	4	-	-	4	8	1
-	-	10	4	24	25	5	54	64	2
1	6	406	46	531	102	21	654	1,060	3
1	1	186	18	829	204	50	1,083	1,269	4
-	-	23	2	35	10	1	46	69	5
-	-	23	7	184	29	12	225	248	6
-	1	6	-	-	-	-	-	6	7
-	-	5	1	95	57	6	158	183	8
-	-	37	16	660	405	247	1,312	1,349	9
-	-	9	1	4	-	-	4	13	10
-	-	24	1	7	-	-	7	31	11
6	-	181	20	199	64	11	274	455	12
-	-	22	2	37	5	-	42	64	13
-	1	54	28	1,196	113	17	1,326	1,380	14
-	2	45	5	92	38	10	140	185	15
-	9	364	121	1,664	623	234	2,526	2,390	16
3	6	399	114	1,404	572	184	2,160	2,559	17
-	-	7	17	88	7	-	45	52	18
-	-	64	4	26	24	-	50	114	19
-	8	66	23	220	66	19	305	371	20
-	-	7	2	9	3	3	15	22	21
-	-	30	8	64	15	3	82	112	22
-	1	55	66	838	475	104	1,467	1,522	23
-	-	3	2	5	3	5	13	16	24
-	-	25	4	164	6	-	170	195	25
-	-	42	5	37	7	1	45	87	26
-	1	62	20	160	23	6	194	256	27
-	1	45	18	668	537	501	1,706	1,751	28
-	-	2	13	50	2	7	59	61	29
-	-	33	22	260	110	29	399	432	30
-	-	40	3	20	7	-	27	67	31
-	-	23	5	95	9	5	109	132	32
-	1	56	4	109	17	8	134	190	33
-	-	5	5	60	18	1	79	84	34
-	-	5	1	4	-	-	4	9	35
-	6	298	18	314	133	24	471	709	36
1	-	31	2	7	5	2	14	45	37
-	-	73	8	85	52	14	151	224	38
1	-	71	10	50	9	3	62	133	39
1	-	13	2	16	-	-	16	29	40
-	-	10	-	-	-	-	-	10	41
-	-	16	5	153	67	13	233	249	42
-	2	131	18	240	56	9	305	436	43
-	1	123	44	786	660	352	1,798	1,921	44
3	-	33	16	339	153	66	558	591	45
40	60	5,529	1,124	24,643	13,954	5,037	43,634	49,163	46

¹ Includes one syndicate. ² Includes four syndicates. ³ Includes three syndicates.

⁴ Includes four syndicates and one association.

⁵ Includes 11 railroad corporations.

⁶ Includes one association, 12 syndicates, and four railroad corporations.

CAPITAL INVESTED:
BY INDUSTRIES.

CAPITAL INVESTED: BY INDUSTRIES.

1896, 1897.

[In this presentation, the figures given under "Amount of Capital Invested" represent the returns made by the same establishments, in each industry, for the years 1896 and 1897, the whole number of establishments considered in "All Industries" being 4,695. Comparison is made, as regards the amount of capital invested, between these two years. The relative increase or decrease in 1897 as compared with 1896 is given with its equivalent percentage.]

INDUSTRIES.	Number of Establishments Considered	AMOUNT OF CAPITAL INVESTED		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Amounts	Percentages
Agricultural implements, . . .	9	\$998,804	\$963,731	-\$35,073	-3.08
Arms and ammunition, . . .	12	1,430,147	1,463,122	+32,975	+2.31
Artisans' tools, . . .	72	2,600,380	2,701,936	+101,556	+3.91
Awnings, sails, tents, etc., . . .	38	103,470	87,096	-16,374	-15.82
Bicycles, tricycles, etc., . . .	14	2,733,111	2,975,357	+242,246	+8.66
Boots and shoes, . . .	675	21,550,886	23,014,435	+1,463,549	+6.79
Boxes, barrels, kegs, etc., . . .	119	2,261,412	2,289,727	+28,315	+1.25
Boxes (paper) and paper goods, . . .	86	3,268,121	3,235,312	-32,809	-1.00
Brick, tiles, and sewer pipe, . . .	61	2,139,909	2,204,265	+64,356	+3.01
Brooms, brushes, and mops, . . .	21	598,738	549,506	-49,232	-8.23
Building materials, . . .	28	571,874	519,591	-52,283	-9.14
Burial cases, caskets, coffins, etc., . . .	8	194,991	237,451	+42,460	+21.78
Buttons and dress trimmings, . . .	14	709,561	710,122	+561	+0.08
Carpetings, . . .	12	6,063,932	6,784,921	+720,939	+11.89
Carriages and wagons, . . .	136	2,350,753	2,210,743	-140,010	-5.96
Cement, kaolin, lime, and plaster, . . .	9	86,430	83,235	-3,195	-3.70
Chemical preparations (compound- ed), . . .	13	903,350	872,203	-31,147	-3.45
Clocks, watches, and jewelry, . . .	106	3,005,301	3,313,489	+308,188	+10.25
Clothing, . . .	155	5,091,309	5,637,416	+546,107	+11.71
Cooking, lighting, and heating ap- paratus, . . .	39	1,410,583	1,522,336	+111,753	+7.92
Cordage and twine, . . .	27	3,121,321	3,486,842	+365,521	+11.69
Cotton goods, . . .	163	112,561,310	110,655,603	-1,905,707	-1.69
Crayons, pencils, crucibles, etc., . . .	3	39,376	47,431	+7,555	+18.95
Drugs and medicines, . . .	24	990,273	988,116	-2,157	-0.22
Dyestuffs, . . .	6	550,716	591,921	+41,205	+7.48
Earthen, plaster, and stone ware, . . .	7	199,243	204,199	+4,956	+2.48
Electrical apparatus and appliances, . . .	20	3,122,496	3,170,359	+47,863	+1.53
Electroplating, . . .	12	60,303	77,828	+17,525	+29.06
Emery and sand paper and cloth, etc., . . .	9	531,293	480,979	-50,314	-9.47
Fancy articles, etc., . . .	20	167,739	214,202	+46,463	+27.70
Fertilizers, . . .	3	102,144	119,124	+16,980	+16.62
Fine arts and taxidermy, . . .	3	28,500	24,740	-3,760	-13.19
Fireworks and matches, . . .	4	92,604	122,356	+29,752	+32.13
Flax, hemp, jute, and linen goods, . . .	8	1,666,622	1,653,270	-13,352	-0.80
Food preparations, . . .	336	16,298,703	16,278,953	-19,750	-0.12
Furniture, . . .	132	4,592,562	7,197,254	+2,604,692	+56.72
Glass, . . .	14	127,330	141,160	+13,830	+10.86

CAPITAL INVESTED: BY INDUSTRIES — 1896, 1897 — Concluded.

INDUSTRIES.	Number of Establishments Considered	AMOUNT OF CAPITAL INVESTED		INCREASE (+) OR DECREASE (—) IN 1897	
		1896	1897	Amounts	Percentages
Glue, isinglass, and starch, . . .	20	\$1,060,454	\$1,037,107	—\$23,347	—2.20
Hair work (animal and human), . .	6	119,325	124,295	+4,970	+4.17
Hose: rubber, linen, etc., . . .	5	875,184	1,149,289	+274,155	+31.33
Hosiery and knit goods, . . .	38	4,053,589	4,136,120	+82,531	+2.04
Ink, mucilage, and paste, . . .	8	87,409	79,895	—7,514	—8.60
Ivory, bone, shell, and horn goods, etc., ...	16	324,024	326,184	+1,560	+0.48
Leather, ...	126	6,995,486	7,559,363	+563,877	+8.06
Liquors and beverages (not spirituous), ...	20	376,444	366,875	—9,569	—2.54
Liquors: malt, distilled, and fermented, ...	58	11,005,618	11,575,704	+570,086	+5.18
Lumber, ...	34	1,393,755	1,475,048	+76,293	+5.45
Machines and machinery, . . .	360	26,058,192	27,574,500	+1,516,308	+5.82
Metals and metallic goods, . . .	384	17,570,592	18,308,737	+738,145	+4.20
Mixed textiles, ...	12	880,296	957,420	+77,124	+8.76
Models, lasts, and patterns, . . .	44	583,107	635,215	+52,108	+8.94
Musical instruments and materials, . . .	64	3,939,349	3,816,719	—122,630	—3.11
Oils and illuminating fluids, . . .	8	341,180	337,442	—3,738	—1.10
Paints, colors, and crude chemicals, . . .	23	711,983	721,014	+9,081	+1.28
Paper, ...	91	20,977,979	20,989,176	+11,197	+0.05
Perfumes, toilet articles, etc., . . .	5	41,188	27,724	—13,414	—32.61
Photographs and photographic materials, ...	25	408,017	371,708	—31,309	—7.77
Polishes and dressing, ...	28	419,501	408,444	—11,057	—2.64
Printing, publishing, and book-binding, ...	55	3,143,882	3,049,962	—93,920	—2.99
Print works, dye works, and bleacheries, ...	49	13,463,444	12,457,612	—1,005,832	—7.47
Railroad construction and equipment, ...	15	2,407,858	2,159,420	—248,438	—10.32
Rubber and elastic goods, . . .	41	8,794,187	9,363,785	+569,648	+6.48
Saddlery and harness, ...	36	317,925	276,947	—40,978	—12.89
Scientific instruments and appliances, ...	20	1,213,273	1,297,095	+83,822	+6.91
Shipbuilding, ...	47	1,032,370	1,038,179	+5,809	+0.51
Silk and silk goods, ...	9	1,683,038	1,838,035	+154,997	+9.21
Sporting and athletic goods, . . .	5	149,753	144,786	—4,967	—3.32
Stone, ...	202	3,519,616	3,492,144	—27,472	—0.78
Straw and palm leaf goods, . . .	16	1,878,431	1,872,659	—5,772	—0.31
Tallow, candles, soap, and grease, . . .	64	1,992,497	2,164,115	+171,618	+8.61
Tobacco, snuff, and cigars, . . .	58	1,338,259	1,538,181	+199,922	+14.94
Toys and games (children's), . . .	9	285,429	299,265	+13,836	+4.85
Trunks and valises, ...	7	51,081	48,392	—2,689	—5.26
Whips, lashes, and stocks, . . .	14	461,359	444,311	—17,048	—3.70
Wooden goods, ...	107	2,237,825	2,239,756	+1,931	+0.09
Woollen goods, ...	117	21,655,660	25,390,647	+3,734,987	+17.25
Worsted goods, ...	31	14,623,706	16,397,790	+1,774,084	+12.13
ALL INDUSTRIES, ...	4,695	\$380,799,877	\$394,371,391	+\$13,571,514	+3.56

STOCK USED: BY INDUSTRIES.

STOCK USED: BY INDUSTRIES.

1896, 1897.

[In this presentation, the figures given under "Value of Stock Used" represent the returns made by the same establishments, in each industry, for the years 1896 and 1897, the whole number of establishments considered in "All Industries" being 4,695. Comparison is made, as regards value of stock used, between these two years. The relative increase or decrease in 1897 as compared with 1896 is given with its equivalent percentage.]

INDUSTRIES.	Number of Establishments Considered	VALUE OF STOCK USED		INCREASE (+) OR DECREASE (−) IN 1897	
		1896	1897	Amounts	Percentages
Agricultural implements, ...	9	\$438,567	\$365,655	−\$69,912	−16.05
Arms and ammunition, ...	12	896,445	403,017	+6,572	+1.66
Artisans' tools, ...	72	852,061	782,342	−69,719	−8.18
Awnings, sails, tents, etc., ...	38	160,908	118,528	−42,382	−26.34
Bicycles, tricycles, etc., ...	14	1,435,487	1,252,101	−183,386	−12.78
Boots and shoes, ...	675	57,383,071	61,012,700	+3,629,629	+6.33
Boxes, barrels, kegs, etc., ...	119	2,221,707	2,250,597	+28,890	+1.30
Boxes (paper) and paper goods, ...	86	3,221,523	3,281,895	+60,372	+1.87
Brick, tiles, and sewer pipe, ...	61	526,538	483,558	−42,980	−8.16
Brooms, brushes, and mops, ...	21	775,511	662,878	−112,633	−14.52
Building materials, ...	28	650,468	622,118	−28,350	−4.36
Burial cases, caskets, coffins, etc., ...	8	208,040	204,820	−3,220	−1.55
Buttons and dress trimmings, ...	14	283,098	343,546	+60,748	+21.46
Carpetings, ...	12	3,445,442	3,898,404	+452,962	+13.15
Carriages and wagons, ...	136	1,558,205	1,458,623	−99,582	−6.39
Cement, kaolin, lime, and plaster, ...	9	174,051	127,788	−46,263	−26.58
Chemical preparations (compound- ed), ...	13	581,532	614,255	+32,723	+5.63
Clocks, watches, and jewelry, ...	106	2,395,204	2,584,897	+189,693	+7.92
Clothing, ...	155	10,459,712	10,763,106	+303,394	+2.90
Cooking, lighting, and heating ap- paratus, ...	39	832,496	810,566	−21,930	−2.63
Cordage and twine, ...	27	3,971,617	3,687,219	−284,398	−7.16
Cotton goods, ...	163	49,172,309	48,987,402	−184,907	−0.38
Crayons, pencils, crucibles, etc., ...	3	30,914	36,588	+5,674	+18.35
Drugs and medicines, ...	24	1,432,404	1,242,734	−189,670	−13.24
Dyestuffs, ...	6	286,355	288,540	+2,185	+0.76
Earthen, plaster, and stone ware, ...	7	71,427	58,933	−12,494	−17.49
Electrical apparatus and appliances, ...	20	2,238,001	2,197,818	−40,183	−1.80
Electroplating, ...	12	42,210	48,017	+5,807	+13.76
Emery and sand paper and cloth, etc., ...	9	282,402	303,091	+21,289	+7.54
Fancy articles, etc., ...	20	240,073	252,097	+12,024	+5.01
Fertilizers, ...	3	129,469	124,910	−4,559	−3.52
Fine arts and taxidermy, ...	3	3,899	3,453	−446	−11.44
Fireworks and matches, ...	4	55,566	64,043	+8,477	+15.26
Flax, hemp, jute, and linen goods, ...	8	957,403	962,131	+4,728	+0.49
Food preparations, ...	336	38,971,952	40,580,984	+1,609,032	+4.13
Furniture, ...	132	5,669,152	5,707,590	+38,438	+0.68
Glass, ...	14	129,221	125,610	−3,711	−2.87

STOCK USED: BY INDUSTRIES — 1896, 1897 — Concluded.

INDUSTRIES.	Number of Estab- lishments Con- sidered	VALUE OF STOCK USED		INCREASE (+) OR DECREASE (—) IN 1897	
		1896	1897	Amounts	Percent- ages
Glue, isinglass, and starch, . . .	20	\$663,753	\$720,801	+\$57,048	+8.59
Hair work (animal and human), . .	6	214,130	210,580	—3,550	—1.66
Hose: rubber, linen, etc., . . .	5	670,377	724,522	+54,145	+8.08
Hosiery and knit goods, . . .	38	2,304,645	2,190,800	—113,845	—4.94
Ink, mucilage, and paste, . . .	8	158,118	183,034	+24,921	+15.76
Ivory, bone, shell, and horn goods, etc., ...	16	374,783	436,926	+62,143	+16.58
Leather, ...	126	13,166,483	16,195,365	+3,028,882	+23.00
Liquors and beverages (not spirit- uous), ...	20	128,625	132,346	+4,221	+3.28
Liquors: malt, distilled, and fer- mented, ...	58	4,010,981	3,790,797	—220,184	—5.49
Lumber, ...	34	1,165,747	1,323,295	+157,548	+13.51
Machines and machinery, . . .	360	10,377,522	8,978,151	—1,399,371	—13.48
Metals and metallic goods, . . .	384	10,321,786	9,953,944	—367,842	—3.56
Mixed textiles, ...	12	702,892	922,617	+219,725	+31.26
Models, lasts, and patterns, . . .	44	298,725	281,890	—11,835	—4.08
Musical instruments and materials,	64	1,492,622	1,708,988	+216,366	+14.50
Oils and illuminating fluids, . . .	8	608,756	589,096	—19,660	—3.23
Paints, colors, and crude chemicals,	23	630,832	689,403	+58,571	+9.28
Paper, ...	91	11,825,894	11,387,275	—438,619	—3.71
Perfumes, toilet articles, etc., . .	5	170,958	167,458	—3,500	—2.05
Photographs and photographic ma- terials, ...	25	310,111	321,972	+11,861	+3.82
Polishes and dressing, ...	28	728,079	696,643	—31,436	—4.32
Printing, publishing, and bookbind- ing, ...	55	1,474,015	1,434,693	—39,317	—2.67
Print works, dye works, and bleach- eries, ...	49	14,818,830	16,216,543	+1,397,713	+9.43
Railroad construction and equip- ment, ...	15	1,865,565	1,345,515	—520,050	—27.88
Rubber and elastic goods, . . .	41	10,751,385	9,894,267	—857,118	—7.97
Saddlery and harness, ...	36	547,370	561,104	+13,734	+2.51
Scientific instruments and appli- ances, ...	20	717,999	821,419	+103,420	+14.40
Shipbuilding, ...	47	587,161	522,658	—64,503	—10.99
Silk and silk goods, ...	9	1,743,443	2,047,082	+303,639	+17.42
Sporting and athletic goods, . . .	5	108,060	97,368	—10,692	—9.89
Stone, ...	202	1,383,426	1,252,476	—130,950	—9.47
Straw and palm leaf goods, . . .	16	2,439,931	2,263,917	—176,014	—7.21
Tallow, candles, soap, and grease,	64	2,299,873	1,986,805	—313,068	—13.61
Tobacco, snuff, and cigars, . . .	58	1,549,930	1,494,954	—54,976	—3.55
Toys and games (children's), . . .	9	188,187	211,457	+23,270	+12.37
Trunks and valises, ...	7	59,415	56,181	—3,234	—5.44
Whips, lashes, and stocks, . . .	14	438,850	454,618	+15,768	+3.59
Wooden goods, ...	107	1,440,672	1,461,003	+20,331	+1.41
Woollen goods, ...	117	12,183,271	15,036,303	+2,853,032	+23.42
Worsted goods, ...	31	10,641,690	14,676,178	+4,034,488	+37.91
ALL INDUSTRIES, ...	4,695	\$317,241,327	\$330,154,301	+\$12,912,974	+4.07



GOODS MADE: BY INDUSTRIES.

GOODS MADE: BY INDUSTRIES.

1896, 1897.

[In this presentation, the figures given under "Value of Goods Made and Work Done" represent the returns made by the same establishments, in each industry, for the years 1896 and 1897, the whole number of establishments considered in "All Industries" being 4,695. Comparison is made, as regards the value of goods made and work done, between these two years. The relative increase or decrease in 1897 as compared with 1896 is given with its equivalent percentage.]

INDUSTRIES.	Number of Establishments Considered	VALUE OF GOODS MADE AND WORK DONE		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Amounts	Percentages
Agricultural implements, ...	9	\$1,063,604	\$979,640	-\$83,964	-7.89
Arms and ammunition, ...	12	1,686,695	1,687,482	+787	+0.05
Artisans' tools, ...	72	2,752,084	2,574,425	-177,659	-6.46
Awnings, sails, tents, etc., ...	38	360,508	300,614	-59,894	-16.61
Bicycles, tricycles, etc., ...	14	4,118,441	3,251,673	-866,768	-21.05
Boots and shoes, ...	675	93,590,910	99,773,896	+6,182,986	+6.61
Boxes, barrels, kegs, etc., ...	119	3,969,685	4,019,327	+49,642	+1.25
Boxes (paper) and paper goods, ...	36	5,603,958	5,898,172	+294,214	+3.59
Brick, tiles, and sewer pipe, ...	61	1,836,724	1,639,069	-197,655	-10.76
Brooms, brushes, and mops, ...	21	1,232,456	1,212,424	-20,032	-5.46
Building materials, ...	28	1,136,924	1,111,213	-25,711	-2.26
Burial cases, caskets, coffins, etc., ...	8	379,171	370,513	-8,658	-2.28
Buttons and dress trimmings, ...	14	660,309	798,793	+138,484	+20.97
Carpetings, ...	12	5,941,456	6,364,709	+423,253	+7.12
Carriages and wagons, ...	136	3,692,337	3,465,183	-227,154	-6.15
Cement, kaolin, lime, and plaster, ...	9	281,709	214,518	-67,191	-23.85
Chemical preparations (compound- ed), ...	13	1,024,637	1,122,083	+97,446	+9.51
Clocks, watches, and jewelry, ...	106	5,962,514	6,649,806	+687,292	+11.53
Clothing, ...	155	18,717,946	19,588,255	+870,309	+4.66
Cooking, lighting, and heating ap- paratus, ...	39	2,747,962	2,819,837	+71,875	+2.62
Cordage and twine, ...	27	5,892,493	5,173,331	-719,162	-12.20
Cotton goods, ...	163	85,561,417	85,414,028	-147,389	-0.17
Crayons, pencils, crucibles, etc., ...	3	56,807	63,138	+6,331	+11.54
Drugs and medicines, ...	24	4,158,902	4,278,836	+119,934	+2.88
Dyestuffs, ...	6	472,286	533,330	+61,044	+12.93
Earthen, plaster, and stone ware, ...	7	235,845	223,663	-12,182	-5.17
Electrical apparatus and appliances, ...	20	4,662,412	4,839,380	+176,968	+4.87
Electroplating, ...	12	197,977	193,197	-4,780	-2.41
Emery and sand paper and cloth, etc., ...	9	570,902	615,729	+44,827	+7.85
Fancy articles, etc., ...	20	573,365	611,231	+37,866	+6.60
Fertilizers, ...	3	219,845	200,363	-19,482	-8.86
Fine arts and taxidermy, ...	3	30,494	26,495	-3,999	-13.11
Fireworks and matches, ...	4	144,091	156,429	+12,338	+8.56
Flax, hemp, jute, and linen goods, ...	8	1,525,755	1,592,221	+66,466	+4.36
Food preparations, ...	336	49,833,763	50,799,905	+966,142	+1.94
Furniture, ...	132	10,591,033	10,666,132	+75,099	+0.71
Glass, ...	14	342,095	359,318	+17,223	+5.03

GOODS MADE: BY INDUSTRIES — 1896, 1897 — Concluded.

INDUSTRIES.	Number of Establishments Considered	VALUE OF GOODS MADE AND WORK DONE		INCREASE (+) OR DECREASE (—) IN 1897	
		1896	1897	Amounts	Percentages
Glue, isinglass, and starch, . . .	20	\$1,046,896	\$1,073,106	+ \$26,210	+2.50
Hair work (animal and human), . .	6	311,050	282,800	—28,250	—9.08
Hose: rubber, linen, etc., . . .	5	1,503,636	1,374,248	—129,388	—8.61
Hosiery and knit goods, . . .	38	4,799,611	4,500,470	—299,141	—6.23
Ink, mucilage, and paste, . . .	8	363,249	404,159	+40,910	+11.26
Ivory, bone, shell, and horn goods, etc., ...	16	811,633	913,751	+102,118	+12.58
Leather, ...	126	18,740,542	21,837,377	+3,096,835	+16.52
Liquors and beverages (not spirituous), ...	20	352,753	321,692	—31,061	—8.81
Liquors: malt, distilled, and fermented, ...	58	10,971,504	11,087,855	+116,351	+1.06
Lumber, ...	34	1,995,460	2,362,101	+366,641	+18.37
Machines and machinery, . . .	360	28,455,766	25,159,094	—3,296,672	—11.59
Metals and metallic goods, . . .	384	22,774,663	22,172,268	—602,395	—2.65
Mixed textiles, ...	12	1,082,886	1,566,294	+483,408	+44.64
Models, lasts, and patterns, . . .	44	974,965	959,169	—15,796	—1.62
Musical instruments and materials, .	64	4,577,814	4,788,757	+210,943	+4.61
Oils and illuminating fluids, . . .	8	785,022	773,750	—11,272	—1.44
Paints, colors, and crude chemicals, .	23	1,026,818	1,041,137	+14,319	+1.39
Paper, ...	91	19,865,086	19,983,033	+67,947	+0.34
Perfumes, toilet articles, etc., . .	5	210,940	198,957	—11,983	—5.68
Photographs and photographic materials, ...	25	876,765	893,621	+16,856	+1.92
Polishes and dressing, ...	28	1,458,462	1,508,427	+49,965	+3.43
Printing, publishing, and bookbinding, ...	55	5,351,823	5,326,343	—25,480	—0.48
Print works, dye works, and bleacheries, ...	49	20,923,822	21,994,786	+1,070,964	+5.12
Railroad construction and equipment, ...	15	3,803,041	3,008,929	—799,112	—21.01
Rubber and elastic goods, . . .	41	17,594,795	15,792,677	—1,802,118	—10.24
Saddlery and harness, ...	36	959,287	962,884	+3,597	+0.37
Scientific instruments and appliances, ...	20	1,714,941	1,898,294	+183,353	+10.69
Shipbuilding, ...	47	1,287,983	1,206,944	—81,039	—6.21
Silk and silk goods, ...	9	2,906,215	3,347,479	+441,264	+15.18
Sporting and athletic goods, . . .	5	268,175	311,070	+42,895	+16.00
Stone, ...	202	5,518,149	5,053,604	—464,545	—8.42
Straw and palm leaf goods, . . .	16	4,118,724	4,011,947	—106,777	—2.59
Tallow, candles, soap, and grease, .	64	3,496,059	3,195,063	—300,996	—8.61
Tobacco, snuff, and cigars, . . .	58	3,437,019	3,388,074	—48,945	—1.42
Toys and games (children's), . . .	9	499,599	559,310	+59,711	+11.95
Trunks and valises, ...	7	151,822	130,097	—21,725	—14.31
Whips, lashes, and stocks, . . .	14	1,076,452	1,092,963	+16,511	+1.53
Wooden goods, ...	107	3,152,044	3,100,750	—51,294	—1.63
Woollen goods, ...	117	20,885,906	25,599,328	+4,713,422	+22.57
Worsted goods, ...	31	17,829,822	24,111,098	+6,281,276	+35.23
ALL INDUSTRIES, ...	4,695	\$559,890,511	\$576,877,064	+ \$16,986,553	+3.04

PERSONS EMPLOYED: BY INDUSTRIES.

SMALLEST, GREATEST, AND AVERAGE NUMBER OF PERSONS EMPLOYED: BY INDUSTRIES.

[In this presentation, by the terms "Periods of employment of smallest number" and "Periods of employment of greatest number" are meant those times, *as regards aggregate number of persons employed*, when the smallest or greatest number, respectively, was employed. It should be borne in mind that the persons here enumerated are wage earners only; officers, clerks, or other salaried persons are not included.]

AGGREGATES—1896.

INDUSTRIES.	Number of Estab- lishments Con- sidered	Aggregate Average Number of Persons Employed	AGGREGATES OF PERSONS EMPLOYED AT PERIODS OF EMPLOYMENT OF—		Excess of Greatest over Smallest Number
			Smallest Number	Greatest Number	
Agricultural implements, ...	9	595	428	681	258
Arms and ammunition, ...	12	1,543	1,283	1,880	597
Artisans' tools, ...	72	1,818	1,533	2,015	482
Awnings, sails, tents, etc., ...	38	165	117	258	141
Bicycles, tricycles, etc., ...	14	2,445	1,013	3,683	2,670
Boots and shoes, ...	675	45,427	34,607	55,413	20,806
Boxes, barrels, kegs, etc., ...	119	2,421	2,085	2,778	693
Boxes (paper) and paper goods, ...	86	3,346	3,393	4,368	975
Brick, tiles, and sewer pipe, ...	61	1,549	634	2,607	1,973
Brooms, brushes, and mops, ...	21	736	589	847	258
Building materials, ...	28	503	444	594	150
Burial cases, caskets, coffins, etc., ...	8	197	192	202	10
Buttons and dress trimmings, ...	14	702	544	918	374
Carpetings, ...	12	4,325	3,502	4,861	1,359
Carriages and wagons, ...	186	1,982	1,487	2,499	1,012
Cement, kaolin, lime, and plaster, ...	9	117	91	134	43
Chemical preparations (compounded), ...	13	340	292	371	79
Clocks, watches, and jewelry, ...	106	3,467	2,595	4,332	1,737
Clothing, ...	155	8,075	6,183	9,715	3,532
Cooking, lighting, and heating apparatus, ...	39	1,718	1,370	2,006	636
Cordage and twine, ...	27	2,509	2,131	3,045	914
Cotton goods, ...	163	77,669	65,779	84,628	18,849
Crayons, pencils, crucibles, etc., ...	8	35	33	36	3
Drugs and medicines, ...	24	665	474	867	393
Dyestuffs, ...	6	97	60	140	80
Earthen, plaster, and stone ware, ...	7	206	182	230	48
Electrical apparatus and appliances, ...	20	2,785	2,435	3,109	674
Electroplating, ...	12	146	113	190	77
Emery and sand paper and cloth, etc., ...	9	231	186	281	95
Fancy articles, etc., ...	20	390	230	592	362
Fertilizers, ...	3	51	50	54	4
Fine arts and taxidermy, ...	8	15	14	16	2

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

SMALLEST, GREATEST, AND AVERAGE NUMBER OF PERSONS
EMPLOYED. AGGREGATES — 1896 — Concluded.

INDUSTRIES.	Number of Estab- lishments Con- sidered	Aggregate Average Number of Persons Employed	AGGREGATES OF PERSONS EMPLOYED AT PERIODS OF EMPLOYMENT OF —		Excess of <i>Greatest</i> over <i>Smallest</i> Number
			<i>Smallest</i> Number	<i>Greatest</i> Number	
Fireworks and matches, ...	4	94	61	129	68
Flax, hemp, jute, and linen goods, ...	8	1,163	1,116	1,216	100
Food preparations, ...	336	7,840	6,773	9,300	2,527
Furniture, ...	132	4,954	4,066	5,813	1,747
Glass, ...	14	272	119	351	232
Glue, isinglass, and starch, ...	20	388	302	633	331
Hair work (animal and human), ...	6	145	131	155	24
Hose: rubber, linen, etc., ...	5	746	450	1,180	730
Hosiery and knit goods, ...	38	5,470	4,347	6,247	1,900
Ink, mucilage, and paste, ...	8	62	53	73	20
Ivory, bone, shell, and horn goods, etc., ...	16	638	510	825	315
Leather, ...	126	6,013	4,749	7,535	2,786
Liquors and beverages (not spirituous), ...	20	138	104	192	88
Liquors: malt, distilled, and fermented, ...	58	1,670	1,511	1,994	483
Lumber, ...	34	800	573	1,036	458
Machines and machinery, ...	360	18,503	14,907	21,740	6,833
Metals and metallic goods, ...	384	13,709	11,211	15,976	4,765
Mixed textiles, ...	12	673	400	806	406
Models, lasts, and patterns, ...	44	468	399	557	158
Musical instruments and materials, ...	64	2,286	1,707	2,760	1,053
Oils and illuminating fluids, ...	8	100	83	118	35
Paints, colors, and crude chemicals, ...	23	181	169	226	57
Paper, ...	91	8,917	7,629	9,727	2,098
Perfumes, toilet articles, etc., ...	5	30	26	33	7
Photographs and photographic materials, ...	25	527	412	632	220
Polishes and dressing, ...	28	218	168	259	91
Printing, publishing, and bookbinding, ...	55	2,963	2,658	3,203	545
Print works, dye works, and bleacheries, ...	49	6,506	5,626	7,238	1,612
Railroad construction and equipment, ...	15	2,372	2,353	3,301	943
Rubber and elastic goods, ...	41	7,547	5,004	8,672	3,668
Saddlery and harness, ...	36	407	332	468	136
Scientific instruments and appliances, ...	20	1,324	1,192	1,433	241
Shipbuilding, ...	47	885	558	1,368	810
Silk and silk goods, ...	9	1,621	1,186	1,911	725
Sporting and athletic goods, ...	5	214	125	312	187
Stone, ...	202	4,735	3,047	6,500	3,453
Straw and palm leaf goods, ...	16	2,259	491	3,849	3,358
Tallow, candles, soap, and grease, ...	64	743	663	811	148
Tobacco, snuff, and cigars, ...	58	1,847	1,477	2,128	651
Toys and games (children's), ...	9	394	238	508	270
Trunks and valises, ...	7	72	42	95	53
Whips, lashes, and stocks, ...	14	396	328	455	129
Wooden goods, ...	107	1,893	1,549	2,258	709
Woollen goods, ...	117	15,088	12,055	18,151	6,096
Worsted goods, ...	31	10,951	6,391	13,005	6,614
ALL INDUSTRIES, ...	4,696	305,492	241,363	358,529	117,166

SMALLEST, GREATEST, AND AVERAGE NUMBER OF PERSONS EMPLOYED: BY INDUSTRIES.

[In this presentation, by the terms "Periods of employment of smallest number" and "Periods of employment of greatest number" are meant those times, *as regards aggregate number of persons employed*, when the smallest or greatest number, respectively, was employed. It should be borne in mind that the persons here enumerated are wage earners only; officers, clerks, or other salaried persons are not included.]

AGGREGATES—1897.

INDUSTRIES.	Number of Estab- lishments Con- sidered	Aggregate Average Number of Persons Employed	AGGREGATES OF PERSONS EMPLOYED AT PERIODS OF EMPLOYMENT OF—		Excess of Greatest over Smallest Number
			Smallest Number	Greatest Number	
Agricultural implements, ...	9	579	461	653	192
Arms and ammunition, ...	12	1,434.	1,151	1,907	756
Artisans' tools, ...	72	1,860	1,687	2,012	325
Awnings, sails, tents, etc., ...	38	162	109	272	163
Bicycles, tricycles, etc., ...	14	2,240	1,009	3,612	2,603
Boots and shoes, ...	675	47,788	38,311	57,340	19,029
Boxes, barrels, kegs, etc., ...	119	2,476	2,020	2,867	847
Boxes (paper) and paper goods, ...	86	3,963	3,397	4,638	1,241
Brick, tiles, and sewer pipe, ...	61	1,490	563	2,569	2,006
Brooms, brushes, and mops, ...	21	733	663	830	167
Building materials, ...	28	451	380	533	153
Burial cases, caskets, coffins, etc., ...	8	195	188	205	17
Buttons and dress trimmings, ...	14	830	607	1,064	457
Carpetings, ...	12	4,622	4,207	4,943	736
Carriages and wagons, ...	136	1,884	1,435	2,397	962
Cement, kaolin, lime, and plaster, ...	9	114	93	125	32
Chemical preparations (compounded), ...	13	394	352	425	73
Clocks, watches, and jewelry, ...	106	3,750	2,946	4,670	1,724
Clothing, ...	155	8,673	6,570	10,465	3,895
Cooking, lighting, and heating apparatus, ...	39	1,717	1,239	2,051	762
Cordage and twine, ...	27	2,406	2,365	2,937	572
Cotton goods, ...	163	79,144	69,330	85,103	15,773
Crayons, pencils, crucibles, etc., ...	3	48	37	59	22
Drugs and medicines, ...	24	689	442	949	507
Dyestuffs, ...	6	126	78	160	82
Earthen, plaster, and stone ware, ...	7	199	172	223	51
Electrical apparatus and appliances, ...	20	2,395	2,559	3,346	787
Electroplating, ...	12	142	106	194	88
Emery and sand paper and cloth, etc., ...	9	233	208	258	50
Fancy articles, etc., ...	20	403	240	659	419
Fertilizers, ...	3	50	47	55	8
Fine arts and taxidermy, ...	3	13	12	15	3

PERSONS EMPLOYED: BY INDUSTRIES—Continued.

SMALLEST, GREATEST, AND AVERAGE NUMBER OF PERSONS
EMPLOYED. AGGREGATES—1897—Concluded.

INDUSTRIES.	Number of Estab- lishments Con- sidered	Aggregate Average Number of Persons Employed	AGGREGATES OF PERSONS EMPLOYED AT PERIODS OF EMPLOYMENT OF—		Excess of Greatest over Smallest Number
			Smallest Number	Greatest Number	
Fireworks and matches, ...	4	97	36	133	97
Flax, hemp, jute, and linen goods, . . .	8	1,159	1,117	1,209	92
Food preparations, ...	336	8,252	7,069	9,935	2,866
Furniture, ...	132	5,023	4,152	5,947	1,795
Glass, ...	14	278	151	331	180
Glue, isinglass, and starch, ...	20	387	310	603	293
Hair work (animal and human), ...	6	147	134	157	23
Hose: rubber, linen, etc., ...	5	683	396	1,056	660
Hosiery and knit goods, ...	38	5,249	4,677	6,280	1,603
Ink, mucilage, and paste, ...	8	66	55	75	20
Ivory, bone, shell, and horn goods, etc., .	16	636	567	835	268
Leather, ...	126	6,413	5,214	7,634	2,420
Liquors and beverages (not spirituous), .	20	110	80	167	87
Liquors: malt, distilled, and fermented, .	58	1,750	1,567	1,936	419
Lumber, ...	34	800	547	1,000	453
Machines and machinery, ...	360	17,387	14,426	20,687	6,261
Metals and metallic goods, ...	384	13,608	11,107	16,023	4,916
Mixed textiles, ...	12	832	598	1,028	430
Models, lasts, and patterns, ...	44	460	383	552	169
Musical instruments and materials, . . .	64	2,540	1,860	2,990	1,130
Oils and illuminating fluids, ...	8	104	83	128	45
Paints, colors, and crude chemicals, . .	23	190	172	242	70
Paper, ...	91	9,177	8,260	9,847	1,587
Perfumes, toilet articles, etc., ...	5	26	22	32	10
Photographs and photographic materials,	25	501	385	590	205
Polishes and dressing, ...	28	246	188	324	136
Printing, publishing, and bookbinding, .	55	3,012	2,596	3,429	833
Print works, dye works, and bleacheries,	49	6,830	5,958	7,414	1,456
Railroad construction and equipment, .	15	2,681	2,421	2,933	512
Rubber and elastic goods, ...	41	7,256	6,091	8,160	2,069
Saddlery and harness, ...	36	402	314	453	139
Scientific instruments and appliances, . .	20	1,338	1,157	1,490	333
Shipbuilding, ...	47	787	491	1,222	731
Silk and silk goods, ...	9	1,764	1,544	1,956	412
Sporting and athletic goods, ...	5	215	143	267	124
Stone, ...	202	4,374	2,695	6,020	3,325
Straw and palm leaf goods, ...	16	2,410	532	4,197	3,665
Tallow, candles, soap, and grease, . . .	64	701	662	768	106
Tobacco, snuff, and cigars, ...	58	1,309	1,506	2,062	556
Toys and games (children's), ...	9	426	269	542	273
Trunks and valises, ...	7	68	52	82	30
Whips, lashes, and stocks, ...	14	416	373	455	82
Wooden goods, ...	107	1,882	1,510	2,207	697
Woollen goods, ...	117	16,866	14,565	18,977	4,412
Worsted goods, ...	81	12,705	11,501	13,813	2,312
ALL INDUSTRIES, ...	4,695	313,816	260,970	363,774	102,804

SMALLEST, GREATEST, AND AVERAGE NUMBER OF PERSONS EMPLOYED: BY INDUSTRIES.

[In this presentation, averages for each establishment are given. These have been arrived at by dividing the aggregates given in the table on pages 27 and 28 by the number of establishments. It should be borne in mind that the persons here enumerated are wage earners only; officers, clerks, or other salaried persons are not included.]

AVERAGES — 1896.

INDUSTRIES.	Number of Estab- lishments Con- sidered	AVERAGES			
		NUMBER OF PERSONS EMPLOYED IN EACH ESTABLISHMENT			
		Average Number	Smallest Number	Greatest Number	Excess of Greatest over Smallest Number
Agricultural implements, ...	9	66	47	76	29
Arms and ammunition, ...	12	129	107	157	50
Artisans' tools, ...	72	25	21	28	7
Awnings, sails, tents, etc., ...	38	4	3	7	4
Bicycles, tricycles, etc., ...	14	175	72	283	191
Boots and shoes, ...	675	67	51	82	31
Boxes, barrels, kegs, etc., ...	119	20	18	23	5
Boxes (paper) and paper goods, ...	86	45	39	51	12
Brick, tiles, and sewer pipe, ...	61	25	10	43	33
Brooms, brushes, and mops, ...	21	35	28	40	12
Building materials, ...	28	18	16	21	5
Burial cases, caskets, coffins, etc., ...	8	25	24	25	1
Buttons and dress trimmings, ...	14	50	39	66	27
Carpetings, ...	12	360	292	405	113
Carriages and wagons, ...	136	15	11	18	7
Cement, kaolin, lime, and plaster, ...	9	13	10	15	5
Chemical preparations (compounded), ...	13	26	22	29	7
Clocks, watches, and jewelry, ...	106	33	24	41	17
Clothing, ...	155	52	40	63	23
Cooking, lighting, and heating apparatus, ...	39	44	35	51	16
Cordage and twine, ...	27	93	79	113	34
Cotton goods, ...	163	476	404	519	115
Crayons, pencils, crucibles, etc., ...	3	12	11	12	1
Drugs and medicines, ...	24	28	20	36	16
Dyestuffs, ...	6	16	10	23	13
Earthen, plaster, and stone ware, ...	7	29	26	33	7
Electrical apparatus and appliances, ...	20	139	122	155	33
Electroplating, ...	12	12	9	16	7
Emery and sand paper and cloth, etc., ...	9	26	21	31	10
Fancy articles, etc., ...	20	20	12	30	18
Fertilizers, ...	3	17	17	18	1
Fine arts and taxidermy, ...	3	5	5	5	*=
Fireworks and matches, ...	4	24	15	32	17

* No change.

PERSONS EMPLOYED: BY INDUSTRIES—Continued.

SMALLEST, GREATEST, AND AVERAGE NUMBER OF PERSONS
EMPLOYED. AVERAGES—1896—Concluded.

INDUSTRIES.	Number of Estab- lishments Con- sidered	AVERAGES			
		NUMBER OF PERSONS EMPLOYED IN EACH ESTABLISHMENT			
		Average Number	Smallest Number	Greatest Number	Excess of Greatest over Smallest Number
Flax, hemp, jute, and linen goods, . . .	8	145	140	152	12
Food preparations, ...	336	23	20	28	8
Furniture, ...	132	38	31	44	13
Glass, ...	14	19	9	25	16
Glue, isinglass, and starch, ...	20	19	15	32	17
Hair work (animal and human), ...	6	24	22	26	4
Hose: rubber, linen, etc., ...	5	149	90	236	146
Hosiery and knit goods, ...	38	144	114	164	50
Ink, mucilage, and paste, ...	8	8	7	9	2
Ivory, bone, shell, and horn goods, etc., ...	16	40	32	52	20
Leather, ...	126	48	38	60	22
Liquors and beverages (not spirituous), ...	20	7	5	10	5
Liquors: malt, distilled, and fermented, ...	58	29	26	34	8
Lumber, ...	34	24	17	30	13
Machines and machinery, ...	360	51	41	60	19
Metals and metallic goods, ...	384	36	29	42	13
Mixed textiles, ...	12	56	33	67	34
Models, lasts, and patterns, ...	44	11	9	13	4
Musical instruments and materials, ...	64	36	27	43	16
Oils and illuminating fluids, ...	8	13	10	15	5
Paints, colors, and crude chemicals, ...	23	8	7	10	3
Paper, ...	91	98	84	107	23
Perfumes, toilet articles, etc., ...	5	6	5	7	2
Photographs and photographic materials, ...	25	21	16	25	9
Pollishes and dressing, ...	28	8	6	9	3
Printing, publishing, and bookbinding, ...	55	54	48	58	10
Print works, dye works, and bleacheries, ...	49	133	115	148	33
Railroad construction and equipment, ...	15	191	157	220	63
Rubber and elastic goods, ...	41	184	122	212	90
Saddlery and harness, ...	36	11	9	13	4
Scientific instruments and appliances, ...	20	66	60	72	12
Shipbuilding, ...	47	19	12	29	17
Silk and silk goods, ...	9	180	132	212	80
Sporting and athletic goods, ...	5	43	25	62	37
Stone, ...	202	23	15	32	17
Straw and palm leaf goods, ...	16	141	31	241	210
Tallow, candles, soap, and grease, ...	64	12	10	13	3
Tobacco, snuff, and cigars, ...	58	32	25	37	12
Toys and games (children's), ...	9	44	26	56	30
Trunks and valises, ...	7	10	6	14	8
Whips, lashes, and stocks, ...	14	23	23	33	10
Wooden goods, ...	107	18	14	21	7
Woollen goods, ...	117	129	103	155	52
Worsted goods, ...	31	353	206	420	214
ALL INDUSTRIES, ...	4,695	65	51	76	25

SMALLEST, GREATEST, AND AVERAGE NUMBER OF PERSONS EMPLOYED: BY INDUSTRIES.

[In this presentation, averages for each establishment are given. These have been arrived at by dividing the aggregates given in the table on pages 29 and 30 by the number of establishments. It should be borne in mind that the persons here enumerated are wage earners only; officers, clerks, or other salaried persons are not included.]

AVERAGES—1897.

INDUSTRIES.	Number of Establishments Considered	AVERAGES			
		NUMBER OF PERSONS EMPLOYED IN EACH ESTABLISHMENT			
		Average Number	Smallest Number	Greatest Number	Excess of Greatest over Smallest Number
Agricultural implements, ...	9	64	51	73	22
Arms and ammunition, ...	12	120	96	159	63
Artisans' tools, ...	72	26	23	38	5
Awnings, sails, tents, etc., ...	38	4	3	7	4
Bicycles, tricycles, etc., ...	14	160	72	258	186
Boots and shoes, ...	675	71	57	85	28
Boxes, barrels, kegs, etc., ...	119	21	17	24	7
Boxes (paper) and paper goods, ...	86	46	40	54	14
Brick, tiles, and sewer pipe, ...	61	24	9	42	33
Brooms, brushes, and mops, ...	21	35	32	40	8
Building materials, ...	28	16	14	19	5
Burial cases, caskets, coffins, etc., ...	8	24	24	26	2
Buttons and dress trimmings, ...	14	59	43	76	33
Carpetings, ...	12	385	351	412	61
Carriages and wagons, ...	136	14	11	18	7
Cement, kaolin, lime, and plaster, ...	9	13	10	14	4
Chemical preparations (compounded), ...	13	30	27	33	6
Clocks, watches, and jewelry, ...	106	35	28	44	16
Clothing, ...	155	56	42	68	26
Cooking, lighting, and heating apparatus, ...	39	44	33	53	20
Cordage and twine, ...	27	89	88	109	21
Cotton goods, ...	163	496	425	522	97
Crayons, pencils, crucibles, etc., ...	3	16	12	20	8
Drugs and medicines, ...	24	29	18	40	22
Dyestuffs, ...	6	21	13	27	14
Earthen, plaster, and stone ware, ...	7	28	25	32	7
Electrical apparatus and appliances, ...	20	145	128	167	39
Electroplating, ...	12	12	9	16	7
Emery and sand paper and cloth, etc., ...	9	26	23	29	6
Fancy articles, etc., ...	20	20	12	33	21
Fertilizers, ...	3	17	16	18	2
Fine arts and taxidermy, ...	3	4	4	5	1
Fireworks and matches, ...	4	24	9	33	24

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

SMALLEST, GREATEST, AND AVERAGE NUMBER OF PERSONS
EMPLOYED. AVERAGES — 1897 — Concluded.

INDUSTRIES.	Number of Estab- lishments Con- sidered	AVERAGES			
		NUMBER OF PERSONS EMPLOYED IN EACH ESTABLISHMENT			
		Average Number	Smallest Number	Greatest Number	Excess of Greatest over Smallest Number
Flax, hemp, jute, and linen goods, . . .	8	145	140	151	11
Food preparations, ...	336	25	21	30	9
Furniture, ...	132	38	31	45	14
Glass, ...	14	20	11	24	13
Glue, isinglass, and starch, ...	20	19	16	30	14
Hair work (animal and human), . . .	6	25	22	26	4
Hose: rubber, linen, etc., ...	5	137	79	211	132
Hosiery and knit goods, ...	38	138	123	165	42
Ink, mucilage, and paste, ...	8	8	7	9	2
Ivory, bone, shell, and horn goods, etc.,	16	43	35	52	17
Leather, ...	126	51	41	61	20
Liquors and beverages (not spirituous),	20	6	4	8	4
Liquors: malt, distilled, and fermented,	58	30	27	34	7
Lumber, ...	34	24	16	29	13
Machines and machinery, ...	360	48	40	57	17
Metals and metallic goods, ...	384	35	29	42	13
Mixed textiles, ...	12	69	50	86	36
Models, lasts, and patterns, ...	44	10	9	13	4
Musical instruments and materials, . .	64	40	29	47	18
Oils and illuminating fluids, ...	8	13	10	16	6
Paints, colors, and crude chemicals, . .	23	8	7	11	4
Paper, ...	91	101	91	108	17
Perfumes, toilet articles, etc., ...	5	5	4	6	2
Photographs and photographic materials,	25	20	15	24	9
Polishes and dressing, ...	28	9	7	12	5
Printing, publishing, and bookbinding, .	55	55	47	62	15
Print works, dye works, and bleacheries,	49	139	122	151	29
Railroad construction and equipment, .	15	179	161	196	35
Rubber and elastic goods, ...	41	177	149	199	50
Saddlery and harness, ...	36	11	9	13	4
Scientific instruments and appliances, .	20	67	58	75	17
Shipbuilding, ...	47	17	10	26	16
Silk and silk goods, ...	9	196	172	217	45
Sporting and athletic goods, ...	5	43	29	53	24
Stone, ...	202	22	13	30	17
Straw and palm leaf goods, ...	16	151	33	262	229
Tallow, candles, soap, and grease, . .	64	11	10	12	2
Tobacco, snuff, and cigars, ...	58	31	26	36	10
Toys and games (children's), ...	9	47	30	60	30
Trunks and valises, ...	7	10	7	12	5
Whips, lashes, and stocks, ...	14	30	27	33	6
Wooden goods, ...	107	18	14	21	7
Woollen goods, ...	117	144	124	162	38
Worsted goods, ...	31	410	371	446	75
ALL INDUSTRIES, ...	4,695	67	56	77	21

RANGE OF EMPLOYMENT AND UNEMPLOYMENT: BY INDUSTRIES.

1896, 1897.

[In this presentation, the excess of greatest over smallest number of persons employed for 1896 and 1897 is brought forward from the presentations on pages 27 to 30 inclusive, and a comparison is made between the two years. The relative increase or decrease in the excess of greatest number over smallest number employed in 1897 as compared with 1896 is given with its equivalent percentage. It should be borne in mind that the persons here enumerated are wage earners only; officers, clerks, or other salaried persons are not included.]

INDUSTRIES.	Number of Estab- lishments Con- sidered	EXCESS OF GREATEST OVER SMALLEST NUMBER OF PERSONS EMPLOYED		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Number	Percent- ages
Agricultural implements, ...	9	258	192	-66	-25.58
Arms and ammunition, ...	12	597	756	+159	+26.63
Artisans' tools, ...	72	482	325	-157	-32.57
Awnings, sails, tents, etc., ...	38	141	163	+22	+15.60
Bicycles, tricycles, etc., ...	14	2,670	2,603	-67	-2.51
Boots and shoes, ...	675	20,806	19,029	-1,777	-8.54
Boxes, barrels, kegs, etc., ...	119	693	847	+154	+22.22
Boxes (paper) and paper goods, ...	86	975	1,241	+266	+27.28
Brick, tiles, and sewer pipe, ...	61	1,973	2,006	+33	+1.67
Brooms, brushes, and mops, ...	21	258	167	-91	-35.27
Building materials, ...	28	150	153	+3	+2.00
Burial cases, caskets, coffins, etc., ...	8	10	17	+7	+70.00
Buttons and dress trimmings, ...	14	374	457	+83	+22.19
Carpetings, ...	12	1,359	736	-623	-45.84
Carriages and wagons, ...	186	1,012	962	-50	-4.94
Cement, kaolin, lime, and plaster, ...	9	43	32	-11	-25.58
Chemical preparations (compounded), ...	13	79	73	-6	-7.59
Clocks, watches, and jewelry, ...	106	1,737	1,724	-13	-0.75
Clothing, ...	155	3,532	3,895	+363	+10.28
Cooking, lighting, and heating apparatus, ...	39	636	762	+126	+19.81
Cordage and twine, ...	27	914	572	-342	-37.42
Cotton goods, ...	163	18,849	15,773	-3,076	-16.32
Crayons, pencils, crucibles, etc., ...	3	3	22	+19	+633.33
Drugs and medicines, ...	24	393	507	+114	+29.01
Dyestuffs, ...	6	80	82	+2	+2.50
Earthen, plaster, and stone ware, ...	7	48	51	+3	+6.25
Electrical apparatus and appliances, ...	20	674	787	+113	+16.77
Electroplating, ...	12	77	88	+11	+14.29
Emery and sand paper and cloth, etc., ...	9	95	50	-45	-47.37
Fancy articles, etc., ...	20	362	419	+57	+15.75
Fertilizers, ...	3	4	8	+4	+100.00
Fine arts and taxidermy, ...	3	2	3	+1	+50.00
Fireworks and matches, ...	4	68	97	+29	+42.65

PERSONS EMPLOYED: BY INDUSTRIES—Continued.

RANGE OF EMPLOYMENT AND UNEMPLOYMENT: BY INDUSTRIES—1896, 1897—Concluded.

INDUSTRIES.	Number of Establishments Considered	EXCESS OF GREATEST OVER SMALLEST NUMBER OF PERSONS EMPLOYED		INCREASE (+) OR DECREASE (—) IN 1897	
		1896	1897	Number	Percentages
Flax, hemp, jute, and linen goods, . . .	8	100	92	—8	—8.00
Food preparations, ...	336	2,527	2,866	+339	+13.42
Furniture, ...	132	1,747	1,795	+48	+2.75
Glass, ...	14	232	180	—52	—22.41
Glue, isinglass, and starch, ...	20	331	293	—38	—11.48
Hair work (animal and human), . . .	6	24	23	—1	—4.17
Hose: rubber, linen, etc., ...	5	730	660	—70	—9.59
Hosiery and knit goods, ...	38	1,900	1,603	—297	—15.63
Ink, mucilage, and paste, ...	8	20	20	=	=
Ivory, bone, shell, and horn goods, etc.,	16	315	268	—47	—14.92
Leather, ...	126	2,736	2,420	—366	—13.14
Liquors and beverages (not spirituous),	20	88	87	—1	—1.14
Liquors: malt, distilled, and fermented,	58	483	419	—64	—13.25
Lumber, ...	34	458	453	—5	—1.09
Machines and machinery, ...	360	6,833	6,261	—572	—8.37
Metals and metallic goods, ...	384	4,765	4,916	+151	+3.17
Mixed textiles, ...	12	406	430	+24	+5.91
Models, lasts, and patterns, ...	44	158	169	+11	+6.96
Musical instruments and materials, . .	64	1,053	1,130	+77	+7.31
Oils and illuminating fluids, ...	8	35	45	+10	+28.57
Paints, colors, and crude chemicals, .	23	57	70	+13	+22.81
Paper, ...	91	2,098	1,587	—511	—24.36
Perfumes, toilet articles, etc., . . .	5	7	10	+3	+42.86
Photographs and photographic materials,	25	220	205	—15	—6.82
Polishes and dressing, ...	28	91	136	+45	+49.45
Printing, publishing, and bookbinding, .	55	545	833	+288	+52.84
Print works, dye works, and bleacheries,	49	1,612	1,456	—156	—9.68
Railroad construction and equipment, .	15	943	512	—431	—45.71
Rubber and elastic goods, ...	41	3,668	2,069	—1,599	—43.59
Saddlery and harness, ...	36	136	139	+3	+2.21
Scientific instruments and appliances, .	20	241	333	+92	+38.17
Shipbuilding, ...	47	810	731	—79	—9.75
Silk and silk goods, ...	9	725	412	—313	—43.17
Sporting and athletic goods, ...	5	187	124	—63	—33.69
Stone, ...	202	3,453	3,325	—128	—3.71
Straw and palm leaf goods, ...	16	3,358	3,665	+307	+9.14
Tallow, candles, soap, and grease, . .	64	143	106	—42	—28.38
Tobacco, snuff, and cigars, ...	58	651	556	—95	—14.59
Toys and games (children's), ...	9	270	273	+3	+1.11
Trunks and valises, ...	7	53	30	—23	—43.40
Whips, lashes, and stocks, ...	14	129	82	—47	—36.43
Wooden goods, ...	107	709	697	—12	—1.69
Woollen goods, ...	117	6,096	4,412	—1,684	—27.62
Worsted goods, ...	31	6,614	2,312	—4,302	—65.04
ALL INDUSTRIES, ...	4,695	117,166	102,304	—14,362	—12.26

* No change.

PERSONS EMPLOYED: BY INDUSTRIES. AGGREGATES, BY MONTHS.

1896, 1897.

[This presentation shows the aggregate number of persons employed, by sex, during each month of the years 1896 and 1897, for all the establishments considered in each industry. It should be borne in mind that the persons here enumerated are wage earners only; officers, clerks, or other salaried persons are not included.]

AGRICULTURAL IMPLEMENTS. [9 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	666	-	666	624	-	624
February, ...	675	-	675	606	-	606
March, ...	666	-	666	588	-	588
April, ...	650	-	650	612	-	612
May, ...	628	-	628	613	-	613
June, ...	587	-	587	545	-	545
July, ...	476	-	476	536	-	536
August, ...	427	-	427	489	-	489
September, ...	517	-	517	557	-	557
October, ...	588	-	588	585	-	585
November, ...	597	-	597	592	-	592
December, ...	653	-	653	575	-	575

ARMS AND AMMUNITION. [12 Establishments.]

January, ...	1,276	119	1,395	1,588	109	1,697
February, ...	1,256	131	1,387	1,621	115	1,736
March, ...	1,321	121	1,442	1,665	116	1,781
April, ...	1,390	154	1,544	1,626	124	1,750
May, ...	1,358	145	1,503	1,423	127	1,550
June, ...	1,394	154	1,548	1,394	128	1,522
July, ...	1,399	155	1,554	934	126	1,060
August, ...	1,401	171	1,572	902	130	1,032
September, ...	1,442	166	1,608	1,132	132	1,264
October, ...	1,501	128	1,629	1,143	141	1,284
November, ...	1,546	112	1,658	1,157	127	1,284
December, ...	1,556	110	1,666	1,123	117	1,240

PERSONS EMPLOYED: BY INDUSTRIES — Continued.
 AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

ARTISANS' TOOLS. [72 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	1,822	54	1,876	1,812	54	1,866
February, ...	1,859	52	1,911	1,828	54	1,882
March, ...	1,847	55	1,902	1,820	53	1,873
April, ...	1,820	54	1,874	1,828	54	1,882
May, ...	1,790	57	1,847	1,805	51	1,856
June, ...	1,763	57	1,820	1,784	52	1,836
July, ...	1,737	47	1,784	1,738	46	1,784
August, ...	1,679	53	1,732	1,779	48	1,827
September, ...	1,625	55	1,680	1,810	51	1,861
October, ...	1,717	55	1,772	1,825	47	1,872
November, ...	1,755	55	1,810	1,839	48	1,887
December, ...	1,768	51	1,819	1,847	48	1,895

AWNINGS, SAILS, TENTS, ETC. [88 Establishments.]

January, ...	110	24	134	125	22	147
February, ...	111	26	137	115	24	139
March, ...	127	33	160	128	31	159
April, ...	135	47	182	132	45	177
May, ...	145	55	200	139	49	188
June, ...	140	53	193	135	50	185
July, ...	128	41	169	121	40	161
August, ...	118	33	151	116	32	148
September, ...	121	22	143	127	23	150
October, ...	135	23	158	152	18	170
November, ...	149	24	173	142	12	154
December, ...	123	22	145	112	12	124

BICYCLES, TRICYCLES, ETC. [14 Establishments.]

January, ...	3,056	64	3,120	2,482	65	2,547
February, ...	3,249	74	3,323	2,777	73	2,850
March, ...	3,333	85	3,418	3,027	89	3,116
April, ...	3,444	89	3,533	3,395	97	3,492
May, ...	3,327	90	3,417	2,981	83	3,064
June, ...	2,537	63	2,600	2,346	66	2,412
July, ...	1,533	34	1,567	1,519	47	1,566
August, ...	1,107	47	1,154	1,141	47	1,188
September, ...	1,125	42	1,167	1,206	43	1,249
October, ...	1,460	47	1,507	1,352	48	1,400
November, ...	1,897	43	1,940	1,805	52	1,857
December, ...	2,549	51	2,600	2,006	53	2,149

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS—1896, 1897—Continued.

BOOTS AND SHOES. [675 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	30,722	13,606	44,328	32,124	14,646	46,770
February, ...	31,921	14,249	46,170	33,012	14,967	47,969
March, ...	32,415	14,064	46,479	33,819	15,060	48,879
April, ...	32,534	14,202	46,736	33,263	14,945	48,208
May, ...	32,492	14,410	46,902	33,106	14,905	48,013
June, ...	31,946	14,106	46,052	31,654	14,066	45,720
July, ...	30,870	13,445	44,315	31,319	13,960	45,279
August, ...	31,258	13,982	45,240	33,377	15,099	48,476
September, ...	31,327	13,849	45,176	33,759	15,626	49,385
October, ...	31,449	13,844	45,293	33,525	15,194	48,719
November, ...	30,532	13,249	43,781	32,595	14,863	47,458
December, ...	30,802	13,458	44,260	32,861	15,276	48,137

BOXES, BARRELS, KEGS, ETC. [119 Establishments.]

January, ...	2,093	406	2,499	2,095	384	2,479
February, ...	2,102	392	2,494	2,097	387	2,484
March, ...	2,106	402	2,508	2,155	410	2,565
April, ...	2,100	397	2,497	2,204	405	2,609
May, ...	2,089	406	2,495	2,173	415	2,588
June, ...	2,059	416	2,475	2,095	404	2,499
July, ...	1,940	403	2,343	1,956	389	2,345
August, ...	1,876	391	2,267	1,948	374	2,322
September, ...	1,909	407	2,316	2,001	391	2,392
October, ...	1,975	416	2,391	1,965	413	2,378
November, ...	2,002	405	2,407	2,070	406	2,476
December, ...	1,915	408	2,323	2,119	396	2,515

BOXES (PAPER) AND PAPER GOODS. [86 Establishments.]

January, ...	1,261	2,733	3,994	1,285	2,542	3,827
February, ...	1,260	2,626	3,886	1,299	2,601	3,900
March, ...	1,271	2,630	3,901	1,327	2,642	3,969
April, ...	1,275	2,616	3,891	1,303	2,634	3,937
May, ...	1,257	2,564	3,821	1,314	2,607	3,921
June, ...	1,247	2,541	3,788	1,289	2,545	3,834
July, ...	1,229	2,505	3,734	1,264	2,443	3,707
August, ...	1,214	2,456	3,670	1,247	2,442	3,689
September, ...	1,232	2,543	3,780	1,327	2,619	3,946
October, ...	1,272	2,643	3,915	1,365	2,805	4,170
November, ...	1,285	2,608	3,893	1,379	2,837	4,216
December, ...	1,278	2,576	3,854	1,433	2,914	4,347

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

BRICK, TILES, AND SEWER PIPE. [61 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	577	7	584	598	6	604
February, ...	598	7	605	582	6	588
March, ...	623	7	630	655	6	661
April, ...	1,509	7	1,516	1,356	7	1,363
May, ...	2,389	7	2,396	2,207	8	2,215
June, ...	2,480	7	2,487	2,364	6	2,370
July, ...	2,438	4	2,442	2,392	6	2,398
August, ...	2,412	4	2,416	2,300	4	2,313
September, ...	2,156	4	2,160	2,142	5	2,147
October, ...	1,593	4	1,597	1,637	4	1,641
November, ...	1,009	4	1,013	908	4	912
December, ...	702	4	706	615	4	619

BROOMS, BRUSHES, AND MOPS. [21 Establishments.]

January, ...	408	336	744	380	386	766
February, ...	416	352	768	370	388	758
March, ...	407	351	758	358	392	750
April, ...	416	360	776	364	378	742
May, ...	394	351	745	362	357	719
June, ...	390	348	738	354	364	718
July, ...	318	279	597	341	331	672
August, ...	357	297	654	333	336	669
September, ...	371	320	691	344	360	704
October, ...	412	347	759	370	376	746
November, ...	427	361	788	386	391	777
December, ...	447	374	821	381	394	775

BUILDING MATERIALS. [28 Establishments.]

January, ...	481	3	484	392	2	394
February, ...	486	3	489	383	4	387
March, ...	488	3	491	389	4	393
April, ...	489	3	492	416	4	420
May, ...	515	4	519	440	5	445
June, ...	530	6	536	460	4	464
July, ...	535	6	541	482	5	487
August, ...	533	6	539	481	5	486
September, ...	508	5	508	494	2	496
October, ...	485	3	488	501	2	503
November, ...	472	3	475	486	2	488
December, ...	487	4	471	464	2	466

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS—1896, 1897—Continued.

BURIAL CASES, CASKETS, COFFINS, ETC. [8 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	176	22	198	170	22	192
February, ...	174	22	196	170	22	192
March, ...	176	22	198	174	22	196
April, ...	175	22	197	180	24	204
May, ...	174	22	196	179	24	203
June, ...	175	22	197	177	24	201
July, ...	177	22	199	176	21	197
August, ...	172	20	192	169	21	190
September, ...	176	21	197	171	21	192
October, ...	176	21	197	170	22	192
November, ...	179	21	200	173	22	195
December, ...	179	21	200	173	22	195

BUTTONS AND DRESS TRIMMINGS. [14 Establishments.]

January, ...	359	482	841	278	382	660
February, ...	339	463	802	282	375	657
March, ...	333	429	762	300	422	722
April, ...	329	417	746	309	492	801
May, ...	314	406	720	317	500	817
June, ...	322	379	701	344	433	827
July, ...	300	352	652	346	467	813
August, ...	286	337	623	348	464	812
September, ...	267	344	611	363	531	894
October, ...	265	356	621	385	607	992
November, ...	284	363	647	393	629	1,022
December, ...	312	377	689	362	564	916

CARPETINGS. [12 Establishments.]

January, ...	2,211	2,469	4,680	2,222	2,297	4,519
February, ...	2,228	2,366	4,594	2,249	2,438	4,687
March, ...	2,269	2,290	4,559	2,214	2,383	4,597
April, ...	2,203	2,305	4,508	2,264	2,392	4,656
May, ...	2,240	2,421	4,661	2,291	2,436	4,727
June, ...	2,233	2,431	4,664	2,273	2,405	4,678
July, ...	2,282	2,306	4,588	2,271	2,377	4,648
August, ...	2,183	2,100	4,283	2,280	2,361	4,641
September, ...	1,664	1,375	3,039	2,232	2,430	4,662
October, ...	1,998	1,804	3,802	2,247	2,351	4,598
November, ...	2,148	2,042	4,190	2,257	2,251	4,508
December, ...	2,202	2,151	4,353	2,315	2,257	4,572

PERSONS EMPLOYED: BY INDUSTRIES — Continued.
 AGGREGATES, BY MONTHS — 1896, 1897 — Continued.
 CARRIAGES AND WAGONS. [186 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	2,086	22	2,068	1,838	15	1,853
February, ...	2,109	24	2,133	1,932	16	1,948
March, ...	2,200	23	2,222	2,067	16	2,083
April, ...	2,299	20	2,319	2,212	13	2,225
May, ...	2,331	21	2,352	2,232	14	2,246
June, ...	2,217	18	2,235	2,148	13	2,161
July, ...	1,837	14	1,851	1,787	12	1,799
August, ...	1,716	15	1,731	1,647	12	1,659
September, ...	1,628	13	1,641	1,611	14	1,625
October, ...	1,640	14	1,654	1,627	13	1,640
November, ...	1,686	15	1,701	1,625	13	1,638
December, ...	1,757	18	1,775	1,680	14	1,694

CEMENT, KAOLIN, LIME, AND PLASTER. [9 Establishments.]

January, ...	107	-	107	98	-	98
February, ...	106	-	106	102	-	102
March, ...	96	-	96	114	-	114
April, ...	116	-	116	113	-	113
May, ...	123	-	123	119	-	119
June, ...	125	-	125	112	-	112
July, ...	124	-	124	118	-	118
August, ...	123	-	123	116	-	116
September, ...	123	-	123	121	-	121
October, ...	128	-	128	119	-	119
November, ...	126	-	126	115	-	115
December, ...	103	-	103	110	-	110

CHEMICAL PREPARATIONS (COMPOUNDED). [13 Establishments.]

January, ...	351	3	354	363	3	366
February, ...	343	2	345	363	4	367
March, ...	343	2	345	382	3	385
April, ...	340	4	344	369	4	373
May, ...	344	4	348	393	6	399
June, ...	343	4	347	391	4	395
July, ...	317	4	321	399	4	403
August, ...	311	4	315	396	4	400
September, ...	308	5	308	396	5	401
October, ...	322	4	326	409	5	414
November, ...	346	3	349	406	5	411
December, ...	345	3	348	385	5	390

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

CLOCKS, WATCHES, AND JEWELRY. [106 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	2,529	1,213	3,742	2,585	1,235	3,770
February, ...	2,575	1,212	3,787	2,520	1,219	3,739
March, ...	2,474	1,180	3,654	2,484	1,252	3,736
April, ...	2,345	1,092	3,437	2,403	1,183	3,586
May, ...	2,305	1,053	3,358	2,337	1,127	3,464
June, ...	2,326	1,090	3,416	2,393	1,159	3,552
July, ...	2,173	1,034	3,207	2,249	1,144	3,393
August, ...	2,043	1,005	3,048	2,279	1,118	3,397
September, ...	2,196	997	3,193	2,621	1,215	3,836
October, ...	2,315	1,012	3,327	2,826	1,311	4,137
November, ...	2,514	1,098	3,612	2,887	1,321	4,208
December, ...	2,590	1,149	3,739	2,864	1,329	4,193

CLOTHING. [155 Establishments.]

January, ...	2,561	5,606	8,167	2,449	5,665	8,114
February, ...	2,595	5,832	8,427	2,486	5,995	8,481
March, ...	2,568	5,969	8,537	2,562	6,331	8,893
April, ...	2,578	5,948	8,526	2,586	6,435	9,021
May, ...	2,552	5,849	8,401	2,597	6,334	8,931
June, ...	2,463	5,424	7,886	2,629	5,912	8,541
July, ...	2,424	4,551	6,975	2,661	5,324	7,985
August, ...	2,442	4,953	7,395	2,689	5,376	8,065
September, ...	2,524	5,477	8,001	2,779	6,076	8,855
October, ...	2,534	5,736	8,320	2,831	6,390	9,221
November, ...	2,499	5,597	8,096	2,808	6,315	9,118
December, ...	2,433	5,622	8,055	2,706	6,077	8,785

COOKING, LIGHTING, AND HEATING APPARATUS. [39 Establishments.]

January, ...	1,545	—	1,545	1,474	1	1,475
February, ...	1,594	—	1,594	1,504	1	1,505
March, ...	1,649	—	1,649	1,626	1	1,627
April, ...	1,656	—	1,656	1,652	1	1,653
May, ...	1,686	—	1,686	1,708	1	1,709
June, ...	1,697	1	1,698	1,718	1	1,719
July, ...	1,610	1	1,611	1,607	1	1,608
August, ...	1,726	1	1,727	1,773	1	1,774
September, ...	1,846	1	1,847	1,886	1	1,887
October, ...	1,925	1	1,926	1,969	1	1,970
November, ...	1,860	1	1,861	1,877	1	1,878
December, ...	1,790	1	1,791	1,777	1	1,778

PERSONS EMPLOYED: BY INDUSTRIES — Continued.
 AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

CORDAGE AND TWINE. [27 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	1,397	1,125	2,522	1,438	1,080	2,518
February, ...	1,408	1,191	2,599	1,441	1,090	2,531
March, ...	1,629	1,228	2,857	1,470	1,162	2,632
April, ...	1,662	1,266	2,908	1,633	1,210	2,743
May, ...	1,697	1,202	2,899	1,598	1,210	2,808
June, ...	1,667	1,194	2,861	1,560	1,150	2,710
July, ...	1,636	1,083	2,719	1,557	1,123	2,680
August, ...	1,179	1,005	2,184	1,150	832	1,982
September, ...	1,072	977	2,049	1,153	863	2,016
October, ...	1,063	999	2,062	1,209	897	2,106
November, ...	1,205	1,019	2,224	1,210	848	2,058
December, ...	1,211	1,000	2,211	1,211	839	2,050

COTTON GOODS. [163 Establishments.]

January, ...	33,614	39,591	78,205	41,213	40,507	81,720
February, ...	39,797	39,674	79,471	39,904	39,107	79,011
March, ...	39,825	39,822	79,647	40,340	39,567	79,907
April, ...	39,741	39,606	79,347	40,235	39,593	79,828
May, ...	39,708	39,875	79,583	40,173	40,075	80,248
June, ...	39,806	39,673	79,479	39,507	39,399	78,906
July, ...	33,159	37,094	75,253	38,671	37,601	76,272
August, ...	34,231	33,159	67,390	36,672	34,998	71,670
September, ...	36,402	35,695	72,097	40,087	39,807	79,844
October, ...	39,601	39,266	78,867	40,522	40,343	80,865
November, ...	40,301	39,844	80,145	40,713	40,421	81,134
December, ...	40,576	40,604	81,480	40,153	40,099	80,252

CRAYONS, PENCILS, CRUCIBLES, ETC. [3 Establishments.]

January, ...	20	15	35	20	23	43
February, ...	20	15	35	21	24	45
March, ...	20	15	35	20	22	42
April, ...	20	15	35	20	22	42
May, ...	20	15	35	21	22	43
June, ...	19	15	34	21	22	43
July, ...	18	15	33	24	34	58
August, ...	17	15	32	23	34	57
September, ...	20	15	35	22	29	51
October, ...	21	15	36	24	33	57
November, ...	21	15	36	20	19	39
December, ...	21	15	36	20	23	43

PERSONS EMPLOYED: BY INDUSTRIES — Continued.
 AGGREGATES, BY MONTHS — 1896, 1897 — Continued.
 DRUGS AND MEDICINES. [24 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	307	245	552	320	260	580
February, ...	313	272	585	333	332	665
March, ...	340	274	614	385	311	646
April, ...	420	317	737	410	341	751
May, ...	382	290	672	362	299	661
June, ...	376	273	649	351	288	639
July, ...	314	240	554	294	261	555
August, ...	373	215	588	344	221	565
September, ...	422	324	746	427	374	801
October, ...	419	369	788	399	422	821
November, ...	434	345	779	398	394	792
December, ...	398	315	713	374	382	756

DYESTUFFS. [6 Establishments.]

January, ...	85	8	93	79	43	122
February, ...	88	11	99	86	46	131
March, ...	77	11	88	85	45	130
April, ...	78	11	89	86	41	127
May, ...	83	11	94	82	40	122
June, ...	60	12	72	82	40	122
July, ...	90	12	102	60	24	84
August, ...	81	10	91	81	24	105
September, ...	63	15	78	87	40	127
October, ...	94	16	110	93	41	134
November, ...	94	20	114	100	56	156
December, ...	99	25	124	98	56	154

EARTHEN, PLASTER, AND STONE WARE. [7 Establishments.]

January, ...	170	22	192	152	21	173
February, ...	164	20	184	153	22	175
March, ...	175	22	197	161	24	185
April, ...	178	21	199	164	29	193
May, ...	184	25	209	167	28	195
June, ...	176	23	199	161	27	188
July, ...	176	35	211	167	30	197
August, ...	186	33	219	185	28	213
September, ...	192	35	227	187	35	222
October, ...	171	33	204	176	38	214
November, ...	184	35	219	181	33	214
December, ...	184	27	211	180	32	212

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

ELECTRICAL APPARATUS AND APPLIANCES. [20 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	2,371	435	2,806	2,399	419	2,818
February, ...	2,371	423	2,794	2,387	412	2,799
March, ...	2,468	396	2,864	2,357	425	2,782
April, ...	2,391	397	2,788	2,331	391	2,722
May, ...	2,475	391	2,866	2,414	364	2,778
June, ...	2,508	396	2,904	2,496	379	2,875
July, ...	2,479	401	2,880	2,578	372	2,950
August, ...	2,448	395	2,843	2,487	371	2,858
September, ...	2,274	399	2,673	2,450	376	2,826
October, ...	2,204	395	2,599	2,498	455	2,953
November, ...	2,265	426	2,691	2,610	488	3,098
December, ...	2,288	415	2,703	2,722	539	3,261

ELECTROPLATING [12 Establishments.]

January, ...	148	4	152	131	6	137
February, ...	145	4	149	145	6	151
March, ...	148	4	152	157	6	163
April, ...	173	4	177	166	6	162
May, ...	181	4	185	162	6	168
June, ...	157	4	161	142	5	147
July, ...	140	4	144	117	6	123
August, ...	122	4	126	115	5	120
September, ...	112	4	116	116	6	122
October, ...	118	4	122	129	6	135
November, ...	124	4	128	129	6	135
December, ...	124	4	128	129	6	135

EMERY AND SAND PAPER AND CLOTH, ETC. [9 Establishments.]

January, ...	232	2	234	217	2	219
February, ...	239	2	241	217	2	219
March, ...	258	2	260	226	2	228
April, ...	268	2	270	223	2	225
May, ...	248	2	250	231	3	234
June, ...	238	2	240	238	3	241
July, ...	231	2	233	233	3	236
August, ...	207	2	209	229	3	232
September, ...	209	2	211	237	3	240
October, ...	192	2	194	238	3	241
November, ...	205	2	207	233	3	236
December, ...	213	2	215	230	3	233

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

FANCY ARTICLES, ETC. [20 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	157	298	455	151	319	470
February, ...	140	259	399	117	227	344
March, ...	125	207	332	126	201	327
April, ...	117	189	306	129	207	336
May, ...	119	190	309	126	220	346
June, ...	117	228	345	125	225	350
July, ...	118	210	328	123	226	349
August, ...	121	222	343	131	264	395
September, ...	138	271	409	189	316	475
October, ...	162	306	468	174	315	489
November, ...	166	313	479	179	301	480
December, ...	162	330	492	171	289	460

FERTILIZERS. [3 Establishments.]

January, ...	50	-	50	54	-	54
February, ...	50	-	50	54	-	54
March, ...	50	-	50	51	-	51
April, ...	51	-	51	54	-	54
May, ...	50	-	50	52	-	52
June, ...	49	-	49	51	-	51
July, ...	49	-	49	47	-	47
August, ...	49	-	49	46	-	46
September, ...	49	-	49	46	-	46
October, ...	53	-	53	47	-	47
November, ...	53	-	53	49	-	49
December, ...	53	-	53	49	-	49

FINE ARTS AND TAXIDERMV. [3 Establishments.]

January, ...	14	1	15	13	1	14
February, ...	14	1	15	13	1	14
March, ...	15	1	16	11	1	12
April, ...	13	1	14	11	1	12
May, ...	14	1	15	11	1	12
June, ...	13	1	14	11	1	12
July, ...	13	1	14	11	1	12
August, ...	13	1	14	11	1	12
September, ...	14	1	15	14	1	15
October, ...	13	1	14	11	1	12
November, ...	14	1	15	14	1	15
December, ...	14	1	15	14	1	15

PERSONS EMPLOYED: BY INDUSTRIES — Continued.
 AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

FIREWORKS AND MATCHES. [4 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	52	41	93	70	30	100
February, ...	56	38	94	71	33	104
March, ...	58	42	100	71	31	102
April, ...	70	44	114	85	33	118
May, ...	63	42	105	87	33	120
June, ...	68	39	107	88	32	120
July, ...	58	40	98	33	15	48
August, ...	46	25	71	43	25	68
September, ...	51	31	82	52	25	77
October, ...	54	23	77	67	31	98
November, ...	61	30	91	68	32	100
December, ...	65	30	95	69	32	101

FLAX, HEMP, JUTE, AND LINEN GOODS. [8 Establishments.]

January, ...	493	650	1,143	495	655	1,150
February, ...	495	653	1,148	494	672	1,166
March, ...	497	658	1,155	492	660	1,152
April, ...	497	675	1,172	488	685	1,173
May, ...	502	689	1,171	493	684	1,177
June, ...	511	677	1,188	489	683	1,172
July, ...	507	672	1,179	487	678	1,165
August, ...	504	664	1,168	483	672	1,155
September, ...	496	680	1,176	480	682	1,162
October, ...	493	670	1,163	487	674	1,161
November, ...	497	645	1,142	470	675	1,145
December, ...	502	656	1,158	474	661	1,135

FOOD PREPARATIONS. [836 Establishments.]

January, ...	5,690	1,923	7,613	5,897	2,107	8,004
February, ...	5,770	1,975	7,745	6,148	2,160	8,308
March, ...	5,572	2,021	7,593	5,852	2,165	8,017
April, ...	5,472	2,025	7,497	5,719	2,129	7,848
May, ...	5,555	1,993	7,548	5,731	2,188	7,919
June, ...	5,678	2,008	7,681	5,837	2,279	8,116
July, ...	5,687	2,011	7,698	5,826	2,168	7,994
August, ...	5,588	1,925	7,513	5,839	2,132	7,971
September, ...	5,746	2,133	7,879	6,024	2,464	8,488
October, ...	5,922	2,357	8,279	6,166	2,580	8,746
November, ...	6,048	2,332	8,380	6,188	2,605	8,793
December, ...	6,063	2,342	8,405	6,253	2,592	8,845

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

FURNITURE. [132 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	4,429	475	4,904	4,293	480	4,773
February, ...	4,437	529	4,966	4,406	541	4,947
March, ...	4,568	536	5,104	4,543	570	5,113
April, ...	4,575	544	5,119	4,556	582	5,138
May, ...	4,573	576	5,149	4,497	612	5,109
June, ...	4,434	587	5,021	4,441	612	5,053
July, ...	4,097	461	4,558	4,188	492	4,680
August, ...	4,176	511	4,687	4,216	538	4,754
September, ...	4,268	522	4,785	4,460	535	4,995
October, ...	4,440	573	5,013	4,545	598	5,244
November, ...	4,487	576	5,063	4,705	585	5,290
December, ...	4,521	525	5,046	4,558	548	5,106

GLASS. [14 Establishments.]

January, ...	320	16	336	271	14	285
February, ...	304	15	319	268	15	283
March, ...	298	16	314	263	14	277
April, ...	291	15	306	262	12	274
May, ...	275	14	289	280	14	294
June, ...	246	10	256	258	18	276
July, ...	203	10	213	253	15	268
August, ...	264	11	275	250	14	264
September, ...	155	6	161	187	7	194
October, ...	183	7	190	269	14	283
November, ...	260	14	274	290	15	305
December, ...	307	15	322	297	14	311

GLUE, ISINGLASS, AND STARCH. [20 Establishments.]

January, ...	515	67	582	501	56	557
February, ...	512	59	571	516	58	574
March, ...	444	62	506	433	58	491
April, ...	344	50	394	343	42	385
May, ...	336	51	387	332	43	375
June, ...	286	51	337	272	40	312
July, ...	201	34	235	219	21	240
August, ...	183	19	202	196	17	213
September, ...	210	21	231	212	20	232
October, ...	297	33	330	328	33	361
November, ...	333	44	377	332	41	373
December, ...	430	57	487	467	55	522

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

HAIR WORK (ANIMAL AND HUMAN). [6 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	68	76	144	66	75	141
February, ...	70	76	146	68	76	144
March, ...	70	82	152	68	80	148
April, ...	71	82	153	68	84	152
May, ...	72	82	154	72	84	156
June, ...	74	77	151	72	83	155
July, ...	74	79	153	73	82	155
August, ...	74	71	145	73	74	147
September, ...	71	69	140	70	74	144
October, ...	69	64	133	71	76	147
November, ...	69	65	134	71	69	140
December, ...	70	66	136	69	67	136

HOSE: RUBBER, LINEN, ETC. [5 Establishments.]

January, ...	750	242	992	540	202	742
February, ...	784	224	1,008	707	290	997
March, ...	862	315	1,177	687	236	923
April, ...	609	301	910	791	259	1,050
May, ...	695	443	1,138	699	210	909
June, ...	514	169	683	566	159	725
July, ...	455	108	563	365	89	454
August, ...	374	75	449	344	56	400
September, ...	384	78	462	346	57	403
October, ...	391	77	468	423	81	504
November, ...	431	89	520	446	88	534
December, ...	465	102	567	458	95	553

HOSIERY AND KNIT GOODS. [38 Establishments.]

January, ...	1,817	3,923	5,740	1,737	3,688	5,425
February, ...	1,804	3,881	5,685	1,706	3,652	5,358
March, ...	1,797	3,915	5,712	1,761	3,713	5,474
April, ...	1,694	3,864	5,558	1,788	3,754	5,542
May, ...	1,714	3,867	5,581	1,772	3,695	5,467
June, ...	1,674	3,751	5,425	1,716	3,597	5,313
July, ...	1,585	3,618	5,203	1,659	3,473	5,132
August, ...	1,509	3,341	4,850	827	1,871	2,698
September, ...	1,644	3,259	4,903	1,676	3,623	5,299
October, ...	1,725	3,772	5,497	1,837	3,879	5,716
November, ...	1,779	3,871	5,650	1,839	3,988	5,827
December, ...	1,745	3,819	5,564	1,812	3,848	5,660

PERSONS EMPLOYED: BY INDUSTRIES — Continued.
 AGGREGATES, BY MONTHS — 1896, 1897 — Continued.
 INK, MUCILAGE, AND PASTE. [8 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	34	20	54	35	20	55
February, ...	39	20	59	40	21	61
March, ...	45	25	70	45	28	73
April, ...	45	24	69	45	28	73
May, ...	46	22	68	47	26	73
June, ...	39	22	61	41	24	65
July, ...	40	20	60	40	20	60
August, ...	39	20	59	41	23	64
September, ...	44	23	67	44	24	68
October, ...	40	26	66	42	27	69
November, ...	40	22	62	40	25	65
December, ...	35	20	55	35	22	57

IVORY, BONE, SHELL, AND HORN GOODS, ETC. [16 Establishments.]

January, ...	589	120	709	564	120	684
February, ...	600	116	716	577	125	702
March, ...	614	139	753	605	124	729
April, ...	540	159	699	563	122	685
May, ...	514	155	669	546	126	672
June, ...	499	146	645	526	131	657
July, ...	472	127	599	530	124	654
August, ...	467	96	563	533	122	655
September, ...	479	99	578	582	117	699
October, ...	465	101	566	602	125	727
November, ...	463	103	566	578	114	692
December, ...	497	104	601	568	119	687

LEATHER. [126 Establishments.]

January, ...	6,206	115	6,321	6,092	121	6,213
February, ...	6,172	119	6,291	6,208	122	6,330
March, ...	6,030	114	6,144	6,211	114	6,325
April, ...	5,984	118	6,102	6,192	111	6,303
May, ...	5,969	123	6,092	6,247	114	6,361
June, ...	5,946	111	6,057	6,160	95	6,255
July, ...	5,835	108	5,943	6,139	82	6,221
August, ...	5,834	105	5,939	6,342	101	6,443
September, ...	5,585	110	5,695	6,418	105	6,523
October, ...	5,447	103	5,550	6,559	114	6,673
November, ...	5,784	113	5,897	6,592	121	6,713
December, ...	5,949	124	6,073	6,434	121	6,555

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

LIQUORS AND BEVERAGES (NOT SPIRITUOUS). [20 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	108	-	108	84	-	84
February, ...	107	-	107	82	-	82
March, ...	112	-	112	84	-	84
April, ...	124	-	124	98	-	98
May, ...	151	-	151	120	-	120
June, ...	163	-	163	135	-	135
July, ...	180	-	180	159	-	159
August, ...	179	-	179	139	-	139
September, ...	151	-	151	126	-	126
October, ...	128	-	128	100	-	100
November, ...	117	-	117	92	-	92
December, ...	108	-	108	84	-	84

LIQUORS: MALT, DISTILLED, AND FERMENTED. [58 Establishments.]

January, ...	1,529	5	1,534	1,600	5	1,605
February, ...	1,542	5	1,547	1,613	4	1,617
March, ...	1,533	5	1,538	1,641	4	1,645
April, ...	1,576	3	1,579	1,671	4	1,675
May, ...	1,667	4	1,661	1,738	4	1,742
June, ...	1,717	5	1,722	1,808	4	1,812
July, ...	1,787	5	1,792	1,873	5	1,878
August, ...	1,783	5	1,788	1,852	5	1,857
September, ...	1,738	4	1,742	1,821	5	1,826
October, ...	1,742	5	1,747	1,818	5	1,823
November, ...	1,682	3	1,685	1,742	5	1,747
December, ...	1,666	3	1,669	1,701	5	1,706

LUMBER. [34 Establishments.]

January, ...	704	7	711	697	6	703
February, ...	695	7	702	673	6	679
March, ...	676	7	683	659	6	665
April, ...	851	9	860	838	9	845
May, ...	900	10	910	880	9	839
June, ...	835	10	845	790	9	799
July, ...	771	9	780	778	9	787
August, ...	752	7	759	791	9	800
September, ...	816	9	825	839	9	848
October, ...	815	8	823	843	9	852
November, ...	823	9	837	851	9	860
December, ...	821	9	830	833	9	892

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

MACHINES AND MACHINERY. [360 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	19,073	368	19,441	17,019	305	17,324
February, ...	19,151	344	19,495	16,706	318	17,023
March, ...	19,165	355	19,520	16,714	325	17,039
April, ...	18,152	344	18,496	17,893	322	18,215
May, ...	18,029	272	18,301	17,780	317	18,097
June, ...	17,943	286	18,229	17,270	294	17,564
July, ...	17,930	273	18,203	16,541	278	16,819
August, ...	17,864	270	18,134	16,714	284	16,998
September, ...	17,554	276	17,830	16,775	309	17,084
October, ...	17,731	307	18,038	17,007	315	17,322
November, ...	17,662	312	17,974	17,256	335	17,591
December, ...	17,637	325	17,962	17,037	323	17,365

METALS AND METALLIC GOODS. [384 Establishments.]

January, ...	12,709	1,494	14,203	11,938	1,363	13,351
February, ...	12,707	1,478	14,185	12,251	1,460	13,711
March, ...	12,644	1,487	14,081	12,465	1,198	13,663
April, ...	12,494	1,462	13,956	12,440	1,447	13,887
May, ...	12,581	1,457	14,038	12,250	1,419	13,669
June, ...	12,268	1,382	13,650	12,012	1,332	13,344
July, ...	11,709	1,361	13,070	11,461	1,305	12,766
August, ...	11,748	1,243	12,991	11,741	1,241	12,982
September, ...	11,903	1,284	13,187	12,096	1,362	13,458
October, ...	12,189	1,341	13,530	12,413	1,525	13,938
November, ...	12,299	1,885	13,684	12,626	1,527	14,153
December, ...	12,148	1,382	13,530	12,679	1,496	14,165

MIXED TEXTILES. [12 Establishments.]

January, ...	533	225	758	476	197	673
February, ...	539	231	770	473	200	673
March, ...	545	231	776	445	192	637
April, ...	534	226	760	505	215	720
May, ...	505	215	720	547	225	772
June, ...	458	216	674	537	229	816
July, ...	443	223	666	619	284	903
August, ...	320	138	458	665	235	900
September, ...	420	168	588	692	263	955
October, ...	439	160	599	692	275	967
November, ...	454	177	631	698	275	973
December, ...	468	202	670	705	275	980

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

MODELS, LASTS, AND PATTERNS. [44 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	464	—	464	483	1	484
February, ...	489	—	489	491	1	492
March, ...	508	—	508	485	1	486
April, ...	502	—	502	471	1	472
May, ...	488	—	488	454	1	455
June, ...	469	—	469	433	1	434
July, ...	454	1	455	431	1	432
August, ...	456	1	457	432	1	433
September, ...	438	1	439	439	1	440
October, ...	442	1	443	437	—	437
November, ...	450	1	451	458	—	458
December, ...	447	1	448	461	2	463

MUSICAL INSTRUMENTS AND MATERIALS. [64 Establishments.]

January, ...	2,529	99	2,628	2,524	93	2,617
February, ...	2,460	99	2,559	2,507	100	2,607
March, ...	2,483	97	2,580	2,585	105	2,690
April, ...	2,459	99	2,558	2,497	104	2,601
May, ...	2,367	98	2,465	2,429	105	2,534
June, ...	1,900	57	1,957	2,356	102	2,458
July, ...	1,782	50	1,832	2,232	99	2,331
August, ...	1,727	49	1,776	2,013	93	2,106
September, ...	1,796	53	1,849	2,314	107	2,421
October, ...	2,162	87	2,249	2,476	119	2,595
November, ...	2,334	91	2,425	2,572	124	2,696
December, ...	2,413	93	2,506	2,615	124	2,739

OILS AND ILLUMINATING FLUIDS. [8 Establishments.]

January, ...	96	10	106	103	10	113
February, ...	95	10	105	102	12	114
March, ...	93	10	103	100	14	114
April, ...	92	10	102	87	13	100
May, ...	82	10	92	80	16	96
June, ...	80	10	90	78	12	90
July, ...	77	9	86	78	9	87
August, ...	83	10	93	88	11	99
September, ...	87	10	97	94	9	103
October, ...	96	9	105	98	9	107
November, ...	101	10	111	98	10	108
December, ...	104	10	114	96	10	106

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

PAINTS, COLORS, AND CRUDE CHEMICALS. [23 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	159	7	166	160	10	170
February, ...	158	7	165	162	10	172
March, ...	160	9	169	159	10	169
April, ...	162	11	173	163	11	174
May, ...	161	12	173	167	11	178
June, ...	194	18	212	207	16	223
July, ...	182	13	195	188	14	202
August, ...	166	13	179	169	10	179
September, ...	168	12	180	183	14	197
October, ...	180	12	192	198	15	213
November, ...	188	13	196	200	17	217
December, ...	151	7	158	158	13	171

PAPER. [91 Establishments.]

January, ...	5,610	3,658	9,268	5,637	3,665	9,202
February, ...	5,577	3,648	9,225	5,567	3,718	9,285
March, ...	5,568	3,622	9,190	5,566	3,726	9,292
April, ...	5,591	3,639	9,230	5,522	3,744	9,266
May, ...	5,527	3,593	9,120	5,480	3,688	9,168
June, ...	5,473	3,584	9,057	5,433	3,638	9,071
July, ...	5,285	3,216	8,501	5,246	3,369	8,715
August, ...	5,244	3,050	8,294	5,419	3,509	8,928
September, ...	5,122	3,265	8,387	5,539	3,645	9,184
October, ...	5,280	3,403	8,683	5,626	3,721	9,347
November, ...	5,349	3,552	8,901	5,660	3,677	9,337
December, ...	5,466	3,590	9,056	5,617	3,685	9,302

PERFUMES, TOILET ARTICLES, ETC. [5 Establishments.]

January, ...	15	14	29	13	15	28
February, ...	15	14	29	13	17	30
March, ...	15	16	31	13	17	30
April, ...	15	15	30	13	17	30
May, ...	14	16	30	13	15	28
June, ...	14	15	29	11	14	25
July, ...	15	14	29	10	13	23
August, ...	15	13	28	11	13	24
September, ...	15	15	30	11	13	24
October, ...	15	16	31	10	15	25
November, ...	15	16	31	11	16	27
December, ...	15	16	31	11	13	24

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

PHOTOGRAPHS AND PHOTOGRAPHIC MATERIALS [25 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	300	171	480	300	204	504
February, ...	328	201	529	304	198	502
March, ...	329	214	543	332	227	559
April, ...	344	217	561	306	205	511
May, ...	349	213	562	260	186	446
June, ...	360	204	564	256	185	441
July, ...	315	202	517	243	182	425
August, ...	243	191	434	284	195	479
September, ...	280	160	440	286	201	487
October, ...	310	201	511	339	202	541
November, ...	345	211	556	344	202	546
December, ...	359	251	610	354	208	562

POLISHES AND DRESSING. [28 Establishments.]

January, ...	118	61	179	118	83	201
February, ...	118	72	190	119	91	210
March, ...	125	103	228	119	147	266
April, ...	126	121	247	121	150	271
May, ...	124	123	247	125	166	291
June, ...	120	120	240	122	145	267
July, ...	116	77	193	116	118	234
August, ...	116	76	192	119	120	239
September, ...	117	118	235	116	130	246
October, ...	117	120	237	120	133	253
November, ...	115	96	211	126	120	246
December, ...	113	78	191	124	116	240

PRINTING, PUBLISHING, AND BOOKBINDING. [55 Establishments.]

January, ...	1,893	1,090	2,983	1,977	1,003	2,980
February, ...	1,811	1,062	2,863	1,900	994	2,894
March, ...	1,923	1,064	2,987	1,906	1,021	2,927
April, ...	1,916	1,044	2,960	1,988	1,027	3,015
May, ...	1,884	1,011	2,895	1,992	1,040	3,032
June, ...	1,927	1,036	2,963	1,981	1,037	3,018
July, ...	1,935	1,041	2,976	1,959	1,043	3,002
August, ...	1,895	1,003	2,898	1,923	999	2,922
September, ...	1,824	1,081	2,855	1,925	995	2,920
October, ...	1,925	1,047	2,972	2,067	1,060	3,127
November, ...	1,926	1,052	2,978	2,042	1,107	3,149
December, ...	1,893	1,088	2,981	2,048	1,119	3,167

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

PRINT WORKS, DYE WORKS, AND BLEACHERIES. [49 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	5,364	1,282	6,646	5,363	1,386	6,749
February, ...	5,351	1,277	6,628	5,341	1,398	6,739
March, ...	5,320	1,249	6,569	5,414	1,403	6,817
April, ...	5,198	1,237	6,435	5,474	1,408	6,882
May, ...	5,014	1,206	6,220	5,568	1,387	6,955
June, ...	4,787	1,197	5,984	5,498	1,375	6,873
July, ...	5,037	1,216	6,273	5,258	1,235	6,493
August, ...	5,163	1,208	6,371	5,415	1,224	6,639
September, ...	5,208	1,203	6,411	5,525	1,230	6,755
October, ...	5,453	1,248	6,701	5,600	1,408	7,003
November, ...	5,467	1,315	6,782	5,570	1,437	7,007
December, ...	5,616	1,395	7,011	5,569	1,447	7,016

RAILROAD CONSTRUCTION AND EQUIPMENT. [15 Establishments.]

January, ...	2,979	—	2,979	2,679	—	2,679
February, ...	2,970	—	2,970	2,621	—	2,621
March, ...	2,951	—	2,951	2,662	—	2,662
April, ...	2,912	—	2,912	2,713	—	2,713
May, ...	2,895	—	2,895	2,752	—	2,752
June, ...	2,968	—	2,968	2,760	—	2,760
July, ...	2,963	—	2,963	2,692	—	2,692
August, ...	2,841	—	2,841	2,666	—	2,666
September, ...	2,816	—	2,816	2,567	—	2,567
October, ...	2,812	—	2,812	2,576	—	2,576
November, ...	2,622	—	2,622	2,696	—	2,696
December, ...	2,703	—	2,703	2,775	—	2,775

RUBBER AND ELASTIC GOODS. [41 Establishments.]

January, ...	4,337	3,610	7,947	3,955	3,373	7,328
February, ...	3,719	3,436	7,155	3,906	3,356	7,262
March, ...	3,786	3,413	7,199	3,511	3,205	6,716
April, ...	3,591	2,653	6,244	3,597	3,243	6,845
May, ...	4,337	3,404	7,741	4,013	3,399	7,382
June, ...	4,365	3,408	7,773	3,939	3,438	7,377
July, ...	4,338	3,365	7,703	3,911	3,321	7,232
August, ...	4,270	3,349	7,619	3,505	3,269	6,774
September, ...	4,241	3,455	7,696	3,989	3,496	7,485
October, ...	4,185	3,692	7,877	4,030	3,551	7,581
November, ...	4,242	3,764	8,006	4,021	3,513	7,539
December, ...	4,225	3,726	7,951	4,042	3,499	7,541

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

SADDLERY AND HARNESS. [36 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	313	102	415	316	96	412
February, ...	296	106	402	318	100	418
March, ...	293	91	384	315	88	403
April, ...	310	68	378	322	62	384
May, ...	332	90	422	335	84	419
June, ...	335	83	418	331	80	411
July, ...	330	83	413	327	77	404
August, ...	330	94	424	322	90	412
September, ...	306	85	391	309	82	391
October, ...	307	108	415	315	102	417
November, ...	308	89	397	304	82	386
December, ...	323	100	423	283	88	371

SCIENTIFIC INSTRUMENTS AND APPLIANCES. [20 Establishments.]

January, ...	1,047	192	1,239	998	205	1,203
February, ...	1,051	200	1,251	1,120	196	1,316
March, ...	1,114	208	1,322	1,127	208	1,335
April, ...	1,157	219	1,376	1,150	207	1,357
May, ...	1,193	203	1,396	1,151	219	1,370
June, ...	1,147	208	1,355	1,141	211	1,352
July, ...	1,141	196	1,337	1,102	205	1,307
August, ...	1,103	190	1,293	1,095	195	1,290
September, ...	1,101	190	1,291	1,110	196	1,306
October, ...	1,140	208	1,348	1,172	214	1,386
November, ...	1,136	212	1,348	1,204	223	1,427
December, ...	1,117	208	1,325	1,182	223	1,405

SHIPBUILDING. [47 Establishments.]

January, ...	681	-	681	823	-	823
February, ...	708	-	708	757	-	757
March, ...	783	-	783	778	-	778
April, ...	992	-	992	907	-	907
May, ...	1,033	-	1,033	888	-	888
June, ...	1,008	-	1,008	813	-	813
July, ...	933	-	933	772	-	772
August, ...	1,038	-	1,038	739	-	739
September, ...	886	-	886	693	-	693
October, ...	823	-	823	698	-	698
November, ...	859	-	859	801	-	801
December, ...	830	-	830	716	-	716

PERSONS EMPLOYED: BY INDUSTRIES — Continued.
 AGGREGATES, BY MONTHS—1896, 1897—Continued.

SILK AND SILK GOODS. [9 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	625	1,237	1,862	589	1,096	1,685
February, ...	598	1,209	1,807	599	1,039	1,638
March, ...	601	1,187	1,788	617	1,089	1,706
April, ...	598	1,168	1,766	616	1,107	1,723
May, ...	576	1,181	1,707	613	1,152	1,765
June, ...	574	1,082	1,656	614	1,136	1,750
July, ...	478	798	1,276	615	1,081	1,696
August, ...	492	849	1,341	629	1,102	1,731
September, ...	514	921	1,435	641	1,140	1,781
October, ...	529	1,000	1,529	649	1,199	1,848
November, ...	544	1,100	1,644	656	1,250	1,906
December, ...	538	1,117	1,650	661	1,259	1,920

SPORTING AND ATHLETIC GOODS. [5 Establishments.]

January, ...	215	32	247	220	41	261
February, ...	211	38	249	208	44	252
March, ...	194	45	239	206	40	246
April, ...	191	39	230	204	39	243
May, ...	176	22	198	197	30	227
June, ...	149	12	161	179	22	201
July, ...	137	5	142	148	8	156
August, ...	142	10	152	147	6	153
September, ...	179	12	191	177	7	184
October, ...	199	25	224	190	22	212
November, ...	212	26	238	197	25	222
December, ...	258	33	291	192	28	220

STONE. [202 Establishments.]

January, ...	3,598	-	3,598	3,139	-	3,139
February, ...	3,628	-	3,628	3,213	-	3,213
March, ...	4,026	-	4,026	3,630	-	3,630
April, ...	5,058	-	5,058	4,555	-	4,555
May, ...	5,417	-	5,417	5,030	-	5,030
June, ...	5,382	-	5,382	5,146	-	5,146
July, ...	5,148	-	5,148	5,041	-	5,041
August, ...	5,290	-	5,290	4,875	-	4,875
September, ...	5,224	-	5,224	4,958	-	4,958
October, ...	5,185	-	5,185	4,738	-	4,738
November, ...	4,802	-	4,802	4,330	-	4,330
December, ...	3,979	-	3,979	3,814	-	3,814

PERSONS EMPLOYED: BY INDUSTRIES — Continued.

AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

STRAW AND PALM LEAF GOODS [16 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	1,186	2,236	3,422	1,242	2,375	3,617
February, ...	1,268	2,431	3,699	1,376	2,581	3,957
March, ...	1,283	2,408	3,691	1,360	2,654	4,014
April, ...	1,245	2,312	3,557	1,374	2,581	3,955
May, ...	1,044	1,813	2,857	1,048	1,967	3,015
June, ...	525	772	1,297	507	704	1,211
July, ...	385	399	784	401	385	786
August, ...	417	408	825	489	410	899
September, ...	565	489	1,054	623	513	1,136
October, ...	669	762	1,431	708	813	1,521
November, ...	757	1,064	1,821	779	1,217	1,996
December, ...	1,000	1,753	2,753	1,001	1,810	2,811

TALLOW, CANDLES, SOAP, AND GREASE. [64 Establishments.]

January, ...	655	89	744	635	78	713
February, ...	660	87	747	639	79	718
March, ...	657	91	748	635	78	713
April, ...	667	91	758	656	77	733
May, ...	664	90	754	655	71	726
June, ...	661	94	755	654	75	729
July, ...	672	96	768	609	78	687
August, ...	666	87	753	610	77	687
September, ...	655	85	740	608	75	683
October, ...	650	83	713	614	78	692
November, ...	671	80	751	597	71	668
December, ...	644	78	722	596	67	663

TOBACCO, SNUFF, AND CIGARS. [58 Establishments.]

January, ...	1,208	477	1,680	1,209	479	1,688
February, ...	1,257	491	1,748	1,255	476	1,731
March, ...	1,227	494	1,721	1,270	494	1,754
April, ...	1,247	505	1,752	1,264	494	1,758
May, ...	1,349	542	1,891	1,288	504	1,787
June, ...	1,437	578	2,015	1,344	508	1,852
July, ...	1,437	573	2,010	1,377	509	1,886
August, ...	1,394	559	1,953	1,352	492	1,844
September, ...	1,368	538	1,906	1,368	524	1,882
October, ...	1,342	531	1,873	1,365	530	1,895
November, ...	1,309	508	1,817	1,345	488	1,833
December, ...	1,263	487	1,750	1,294	495	1,789

PERSONS EMPLOYED: BY INDUSTRIES — Continued.
 AGGREGATES, BY MONTHS — 1896, 1897 — Continued.
 TOYS AND GAMES (CHILDREN'S). [9 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	280	37	267	264	31	295
February, ...	255	45	300	295	36	331
March, ...	274	52	326	304	48	352
April, ...	313	73	386	344	64	408
May, ...	325	81	406	351	69	420
June, ...	348	85	433	384	85	469
July, ...	300	72	372	346	74	420
August, ...	336	80	416	382	79	461
September, ...	347	96	433	388	89	477
October, ...	374	97	471	407	105	512
November, ...	381	99	480	405	103	508
December, ...	351	77	428	354	87	441

TRUNKS AND VALISES. [7 Establishments.]

January, ...	55	1	56	60	1	61
February, ...	66	7	73	58	7	65
March, ...	76	6	82	59	6	65
April, ...	70	7	77	64	7	71
May, ...	69	8	77	64	7	71
June, ...	72	8	80	59	7	66
July, ...	65	7	72	64	7	71
August, ...	69	7	76	63	8	71
September, ...	69	8	77	65	8	73
October, ...	66	8	74	64	8	72
November, ...	61	8	69	63	7	70
December, ...	52	1	53	60	7	67

WHIPS, LASHES, AND STOCKS. [14 Establishments.]

January, ...	314	126	440	276	108	384
February, ...	317	128	445	277	111	388
March, ...	321	128	449	284	113	397
April, ...	296	118	414	294	118	412
May, ...	287	115	402	300	124	424
June, ...	266	104	370	299	124	423
July, ...	277	112	389	301	124	425
August, ...	253	94	347	304	125	429
September, ...	261	95	356	304	128	432
October, ...	260	102	362	309	134	443
November, ...	260	102	362	299	123	422
December, ...	285	121	406	284	120	404

PERSONS EMPLOYED: BY INDUSTRIES — Continued.
 AGGREGATES, BY MONTHS — 1896, 1897 — Continued.

WOODEN GOODS. [107 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	1,855	54	1,909	1,706	54	1,760
February, ...	1,839	57	1,896	1,739	57	1,796
March, ...	1,788	59	1,847	1,744	59	1,803
April, ...	1,800	61	1,861	1,804	66	1,870
May, ...	1,819	69	1,888	1,805	65	1,870
June, ...	1,850	69	1,919	1,805	66	1,871
July, ...	1,810	68	1,878	1,828	68	1,896
August, ...	1,829	61	1,890	1,869	63	1,932
September, ...	1,917	54	1,971	1,870	64	1,934
October, ...	1,917	57	1,974	1,865	65	1,930
November, ...	1,795	59	1,854	1,838	73	1,911
December, ...	1,774	70	1,844	1,784	76	1,860

WOOLLEN GOODS. [117 Establishments.]

January, ...	9,920	5,831	15,751	9,939	5,785	15,724
February, ...	10,294	6,011	16,305	10,022	5,894	15,916
March, ...	10,515	6,205	16,720	10,278	6,071	16,349
April, ...	10,169	6,063	16,232	10,461	6,209	16,670
May, ...	9,841	5,922	15,763	10,683	6,232	16,915
June, ...	9,236	5,571	14,807	10,384	6,130	16,514
July, ...	8,686	5,138	13,824	10,363	6,185	16,548
August, ...	8,137	4,782	12,919	10,673	6,290	16,963
September, ...	8,559	4,911	13,470	11,017	6,446	17,463
October, ...	9,746	5,445	15,191	11,331	6,634	17,965
November, ...	9,691	5,437	15,128	11,253	6,526	17,779
December, ...	9,568	5,472	15,040	11,121	6,373	17,494

WORSTED GOODS. [31 Establishments.]

January, ...	6,517	5,862	12,379	6,426	5,432	11,908
February, ...	6,576	5,886	12,462	6,638	5,579	12,217
March, ...	5,949	5,247	11,196	6,789	5,699	12,488
April, ...	6,022	5,261	11,283	7,065	5,873	12,938
May, ...	5,877	5,163	11,040	6,963	5,922	12,885
June, ...	4,885	4,534	9,419	6,780	5,789	12,569
July, ...	4,685	4,291	8,976	6,781	5,817	12,598
August, ...	5,149	4,660	9,809	6,881	5,820	12,701
September, ...	4,931	4,350	9,281	6,932	5,811	12,743
October, ...	6,076	5,374	11,450	7,205	6,052	13,257
November, ...	6,080	5,831	11,911	7,223	6,188	13,411
December, ...	6,486	5,761	12,247	6,861	5,960	12,821

PERSONS EMPLOYED: BY INDUSTRIES — Concluded.
 AGGREGATES, BY MONTHS — 1896, 1897 — Concluded.
 ALL INDUSTRIES. [4,695 Establishments.]

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	205,818	104,960	310,778	204,598	105,640	310,238
February, ...	208,644	106,037	314,681	205,721	105,794	311,515
March, ...	209,634	105,675	315,309	208,480	107,020	315,500
April, ...	209,871	104,532	314,403	212,314	107,750	320,064
May, ...	210,988	104,801	315,789	212,884	107,545	320,429
June, ...	206,014	101,332	307,346	207,932	103,746	311,678
July, ...	198,307	94,501	292,808	201,930	99,586	301,516
August, ...	192,979	90,306	283,285	200,856	96,275	297,131
September, ...	194,726	93,308	288,034	208,955	106,000	314,955
October, ...	202,831	101,157	303,988	212,100	108,847	320,947
November, ...	203,638	102,554	306,192	211,707	108,982	320,689
December, ...	205,079	104,452	309,531	209,997	108,860	318,857



WAGES PAID: BY INDUSTRIES.

WAGES PAID: BY INDUSTRIES.

1896, 1897.

[In this presentation, the figures given under "Total Amount Paid in Wages During the Year" represent the returns made by the same establishments, in each industry, for the years 1896 and 1897, the whole number of establishments considered in "All Industries" being 4,695. Comparison is made, as regards the total amount paid in wages, between these two years. The relative increase or decrease in 1897 as compared with 1896 is given with its equivalent percentage. It should be borne in mind that these figures represent the sums paid to wage earners only and do not include amounts paid to officers, clerks, or other salaried persons.]

INDUSTRIES.	Number of Establishments Considered	TOTAL AMOUNT PAID IN WAGES DURING THE YEAR		INCREASE (+) OR DECREASE (—) IN 1897	
		1896	1897	Amounts	Percentages
Agricultural implements, ...	9	\$288,054	\$274,332	—\$13,722	—4.76
Arms and ammunition, ...	12	782,734	640,641	—142,093	—18.15
Artisans' tools, ...	72	1,004,444	938,971	—65,473	—6.52
Awnings, sails, tents, etc., ...	38	89,508	84,643	—4,865	—5.44
Bicycles, tricycles, etc., ...	14	1,520,100	1,357,518	—162,582	—10.70
Boots and shoes, ...	675	21,868,856	22,505,580	+636,724	+2.91
Boxes, barrels, kegs, etc., ...	119	1,030,303	1,058,201	+27,898	+2.71
Boxes (paper) and paper goods, ...	86	1,378,223	1,445,077	+66,854	+4.85
Brick, tiles, and sewer pipe, ...	61	688,315	634,956	—53,359	—7.75
Brooms, brushes, and mops, ...	21	267,184	250,567	—16,567	—6.20
Building materials, ...	28	297,795	266,926	—30,869	—10.37
Burial cases, caskets, coffins, etc., ...	8	122,903	120,273	—2,630	—2.14
Buttons and dress trimmings, ...	14	229,689	277,420	+47,731	+20.78
Carpetings, ...	12	1,490,036	1,605,379	+115,343	+7.74
Carriages and wagons, ...	136	1,160,075	1,088,431	—71,644	—6.18
Cement, kaolin, lime, and plaster, ...	9	54,398	53,080	—1,318	—2.32
Chemical preparations (compounded), ...	13	191,091	214,969	+23,878	+12.50
Clocks, watches, and jewelry, ...	106	1,699,817	1,861,320	+161,503	+9.50
Clothing, ...	155	3,051,848	3,300,285	+248,437	+8.14
Cooking, lighting, and heating apparatus, ...	39	1,076,235	1,048,302	—27,933	—2.60
Cordage and twine, ...	27	865,089	792,827	—72,262	—8.35
Cotton goods, ...	163	25,603,529	26,460,493	+856,964	+3.35
Crayons, pencils, erasers, etc., ...	3	13,341	15,075	+1,734	+13.00
Drugs and medicines, ...	24	269,653	280,728	+11,075	+4.11
Dyestuffs, ...	6	47,040	61,746	+14,706	+31.26
Earthen, plaster, and stone ware, ...	7	102,186	92,559	—9,627	—9.42
Electrical apparatus and appliances, ...	20	1,407,144	1,366,732	—40,412	—2.87
Electroplating, ...	12	82,257	77,563	—4,694	—5.71
Emery and sand paper and cloth, etc., ...	9	116,258	123,640	+7,382	+6.35
Fancy articles, etc., ...	20	147,353	146,987	—366	—0.25
Fertilizers, ...	3	31,187	29,704	—1,483	—4.76
Fine arts and taxidermy, ...	3	8,480	7,950	—530	—6.25
Fireworks and matches, ...	4	35,774	37,226	+1,452	+4.06
Flax, hemp, jute, and linen goods, ...	8	327,274	347,288	+20,014	+6.12
Food preparations, ...	336	3,567,644	3,661,583	+113,939	+3.19

WAGES PAID: BY INDUSTRIES—Continued.

WAGES PAID: BY INDUSTRIES—1896, 1897—Concluded.

INDUSTRIES.	Number of Estab- lishments Con- sidered	TOTAL AMOUNT PAID IN WAGES DURING THE YEAR		INCREASE (+) OR DECREASE (—) IN 1897	
		1896	1897	Amounts	Per- centages
Furniture, ...	132	\$2,370,373	\$2,358,797	—\$11,576	—0.49
Glass, ...	14	134,154	142,869	+8,715	+6.50
Glue, isinglass, and starch, ...	20	154,355	166,909	+12,554	+8.13
Hair work (animal and human), . . .	6	48,864	44,851	—4,013	—8.21
Hose: rubber, linen, etc., ...	5	299,653	301,428	+1,775	+0.59
Hosiery and knit goods, ...	38	1,655,417	1,586,389	—69,028	—4.17
Ink, mucilage, and paste, ...	8	83,775	84,497	+722	+2.14
Ivory, bone, shell, and horn goods, etc.,	16	251,609	279,328	+27,699	+10.99
Leather, ...	126	2,851,793	3,054,684	+202,891	+7.11
Liquors and beverages (not spirit- uous), ...	20	78,722	65,516	—13,206	—16.78
Liquors: malt, distilled, and fer- mented, ...	58	1,234,420	1,316,540	+82,120	+6.65
Lumber, ...	34	376,017	372,893	—3,124	—0.83
Machines and machinery, ...	360	9,941,138	9,116,192	—824,934	—8.30
Metals and metallic goods, ...	384	6,920,670	6,707,323	—213,347	—3.08
Mixed textiles, ...	12	230,418	283,598	+53,180	+23.08
Models, lasts, and patterns, ...	44	339,570	321,744	—17,826	—5.25
Musical instruments and materials, . .	64	1,361,623	1,447,378	+85,755	+6.30
Oils and illuminating fluids, ...	8	54,350	53,204	—1,146	—2.11
Paints, colors, and crude chemicals, .	23	108,976	112,803	+3,827	+3.51
Paper, ...	91	3,680,395	3,800,744	+120,349	+3.27
Perfumes, toilet articles, etc., . . .	5	11,649	11,070	—579	—4.97
Photographs and photographic ma- terials, ...	25	235,755	211,610	—24,145	—10.24
Polishes and dressing, ...	28	98,135	106,947	+8,812	+8.98
Printing, publishing, and bookbinding,	55	1,536,506	1,647,557	+111,051	+7.22
Print works, dye works, and bleach- eries, ...	49	2,716,660	2,791,303	+74,643	+2.75
Railroad construction and equipment,	15	1,669,874	1,539,121	—130,753	—7.83
Rubber and elastic goods, ...	41	3,198,592	2,906,219	—292,373	—9.08
Saddlery and harness, ...	36	216,586	211,292	—5,294	—2.44
Scientific instruments and appliances,	20	621,337	603,901	—17,436	—2.81
Shipbuilding, ...	47	574,123	490,709	—83,414	—14.53
Silk and silk goods, ...	9	580,705	640,386	+59,681	+10.28
Sporting and athletic goods, ...	5	106,623	109,974	+3,351	+3.14
Stone, ...	202	2,461,295	2,285,446	—175,849	—7.14
Straw and palm leaf goods, ...	16	1,045,171	1,115,876	+70,205	+6.72
Tallow, candles, soap, and grease, . .	64	369,980	344,430	—25,550	—6.91
Tobacco, snuff, and cigars, ...	58	1,135,517	1,114,212	—21,305	—1.88
Toys and games (children's), ...	9	162,484	176,356	+13,872	+8.54
Trunks and valises, ...	7	36,281	34,408	—1,873	—5.18
Whips, lashes, and stocks, ...	14	165,716	172,289	+6,573	+3.97
Wooden goods, ...	107	1,043,019	990,529	—52,490	—5.03
Woollen goods, ...	117	5,494,181	6,285,365	+791,184	+14.40
Worsted goods, ...	31	3,819,656	4,528,314	+708,658	+18.55
ALL INDUSTRIES, ...	4,695	\$130,339,959	\$132,334,075	+\$1,994,116	+1.53

AVERAGE YEARLY EARNINGS: BY INDUSTRIES.

1896, 1897.

[The average yearly earnings shown in this presentation have been obtained by dividing the total amount paid in wages during the years 1896 and 1897 (pages 67 and 68) by the number representing the average number of persons employed during the same years (pages 27 to 30 inclusive). The relative increase or decrease in average yearly earnings in 1897 as compared with 1896 is given with its equivalent percentage. It should be borne in mind that these figures represent the sums paid to wage earners only and do not include amounts paid to officers, clerks, or other salaried persons.]

INDUSTRIES.	Number of Estab- lishments Con- sidered	AVERAGE YEARLY EARNINGS		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Amounts	Percent- ages
Agricultural implements, ...	9	\$484.12	\$473.80	—\$10.32	—2.13
Arms and ammunition, ...	12	507.28	446.76	—60.52	—11.93
Artisans' tools, ...	72	552.50	504.82	—47.68	—8.63
Awnings, sails, tents, etc., ...	38	542.47	522.49	—19.98	—3.68
Bicycles, tricycles, etc., ...	14	621.72	606.03	—15.69	—2.52
Boots and shoes, ...	675	481.41	470.95	—10.46	—2.17
Boxes, barrels, kegs, etc., ...	119	425.57	427.38	+1.81	+0.43
Boxes (paper) and paper goods, ...	86	358.35	364.64	+6.29	+1.76
Brick, tiles, and sewer pipe, ...	61	444.36	426.14	—18.22	—4.10
Brooms, brushes, and mops, ...	21	362.95	341.84	—21.11	—5.82
Building materials, ...	28	592.04	591.85	—0.19	—0.03
Burial cases, caskets, coffins, etc., ...	8	623.87	616.78	—7.09	—1.14
Buttons and dress trimmings, ...	14	327.19	334.24	+7.05	+2.15
Carpetings, ...	12	344.52	347.33	+2.81	+0.82
Carriages and wagons, ...	136	585.31	577.72	—7.59	—1.30
Cement, kaolin, lime, and plaster, ...	9	464.94	470.88	+5.94	+1.28
Chemical preparations (compounded), ...	13	562.03	545.61	—16.42	—2.92
Clocks, watches, and jewelry, ...	106	490.28	496.35	+6.07	+1.24
Clothing, ...	155	377.94	380.52	+2.58	+0.68
Cooking, lighting, and heating apparatus, ...	39	626.45	610.54	—15.91	—2.54
Cordage and twine, ...	27	344.79	329.52	—15.27	—4.43
Cotton goods, ...	163	329.65	334.33	+4.68	+1.42
Crayons, pencils, crucibles, etc., ...	3	381.17	314.06	—67.11	—17.61
Drugs and medicines, ...	24	405.49	407.44	+1.95	+0.48
Dyestuffs, ...	6	484.95	490.05	+5.10	+1.05
Earthen, plaster, and stone ware, ...	7	496.05	465.12	—30.93	—6.24
Electrical apparatus and appliances, ...	20	505.26	472.10	—33.16	—6.56
Electroplating, ...	12	563.40	546.22	—17.18	—3.05
Emery and sand paper and cloth, etc., ...	9	503.28	530.64	+27.36	+5.44
Fancy articles, etc., ...	20	377.83	364.73	—13.10	—3.47
Fertilizers, ...	3	611.51	594.08	—17.43	—2.85
Fine arts and taxidermy, ...	3	565.33	611.54	+46.21	+8.17
Fireworks and matches, ...	4	380.57	383.77	+3.20	+0.84

WAGES PAID: BY INDUSTRIES — Continued.

AVERAGE YEARLY EARNINGS: BY INDUSTRIES—1896, 1897
— Concluded.

INDUSTRIES.	Number of Estab- lishments (Con- sidered)	AVERAGE YEARLY EARNINGS		INCREASE (+) OR DECREASE (—) IN 1897	
		1896	1897	Amounts	Percent- ages
Flax, hemp, jute, and linen goods, . . .	8	\$281.40	\$299.64	+\$18.24	+6.48
Food preparations, ...	336	455.06	446.14	—8.92	—1.96
Furniture, ...	132	478.48	469.60	—8.88	—1.86
Glass, ...	14	493.21	513.92	+20.71	+4.20
Glue, isinglass, and starch, ...	20	397.82	431.29	+33.47	+8.41
Hair work (animal and human), . . .	6	336.99	305.11	—31.88	—9.46
Hose: rubber, linen, etc., ...	5	401.68	441.33	+39.65	+9.87
Hosiery and knit goods, ...	38	302.64	302.23	—0.41	—0.14
Ink, mucilage, and paste, ...	8	544.76	522.68	—22.08	—4.05
Ivory, bone, shell, and horn goods, etc.,	16	394.47	407.18	+12.71	+3.22
Leather, ...	126	474.27	476.33	+2.06	+0.43
Liquors and beverages (not spirituous), .	20	570.45	595.60	+25.15	+4.41
Liquors: malt, distilled, and fermented, .	58	739.17	752.31	+13.14	+1.78
Lumber, ...	34	470.02	466.12	—3.90	—0.83
Machines and machinery, ...	360	537.27	524.31	—12.96	—2.41
Metals and metallic goods, ...	384	504.83	492.90	—11.93	—2.36
Mixed textiles, ...	12	342.37	340.86	—1.51	—0.44
Models, lasts, and patterns, ...	44	725.58	699.44	—26.14	—3.60
Musical instruments and materials, . .	64	595.64	599.83	—25.81	—4.33
Oils and illuminating fluids, ...	8	543.50	511.58	—31.92	—5.87
Paints, colors, and crude chemicals, . .	23	662.08	593.70	—68.38	—10.33
Paper, ...	91	412.74	414.16	+1.42	+0.34
Perfumes, toilet articles, etc., ...	5	388.30	426.77	+38.47	+9.91
Photographs and photographic materials, .	25	447.35	422.38	—24.97	—5.58
Polishes and dressing, ...	28	450.16	434.74	—15.42	—3.43
Printing, publishing, and bookbinding, .	55	518.56	513.80	—4.76	—0.92
Print works, dye works, and bleacheries, .	49	417.56	408.68	—8.88	—2.13
Railroad construction and equipment, . .	15	581.43	574.08	—7.35	—1.26
Rubber and elastic goods, ...	41	423.56	400.53	—23.03	—5.44
Saddlery and harness, ...	36	532.15	525.60	—6.55	—1.23
Scientific instruments and appliances, . .	20	469.29	451.35	—17.94	—3.82
Shipbuilding, ...	47	648.73	623.62	—25.21	—3.89
Silk and silk goods, ...	9	358.24	363.03	+4.79	+1.34
Sporting and athletic goods, ...	5	498.24	511.51	+13.27	+2.66
Stone, ...	202	519.81	522.51	+2.70	+0.52
Straw and palm leaf goods, ...	16	462.67	462.81	+0.14	+0.03
Tallow, candles, soap, and grease, . . .	64	497.95	491.34	—6.61	—1.33
Tobacco, snuff, and cigars, ...	58	614.79	615.93	+1.14	+0.19
Toys and games (children's), ...	9	412.40	413.98	+1.58	+0.38
Trunks and valises, ...	7	503.90	505.93	+2.03	+0.40
Whips, lashes, and stocks, ...	14	418.47	414.16	—4.31	—1.03
Wooden goods, ...	107	550.99	526.32	—24.67	—4.48
Woollen goods, ...	117	364.14	372.66	+8.52	+2.34
Worsted goods, ...	31	348.80	356.42	+7.62	+2.18
ALL INDUSTRIES, ...	4,695	\$426.66	\$421.69	—\$4.97	—1.16

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES.

1896, 1897.

[In this presentation is shown, for 1896 and 1897, a classification by sex of the weekly earnings, ranging from under \$5 per week to \$20 and over. The returns were made by manufacturers to cover the week during which the largest number of persons was employed. It should be borne in mind that these figures represent wage earners only; officers, clerks, or other salaried persons are not included.]

AGRICULTURAL IMPLEMENTS. [9 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	22	-	22	23	-	23
\$5 but under \$6, ...	21	-	21	18	-	18
\$6 but under \$7, ...	38	-	38	42	-	42
\$7 but under \$8, ...	103	-	103	92	-	92
\$8 but under \$9, ...	78	-	78	62	-	62
\$9 but under \$10, ...	83	-	83	113	-	113
\$10 but under \$12, ...	123	-	123	116	-	116
\$12 but under \$15, ...	145	-	145	117	-	117
\$15 but under \$20, ...	56	-	56	47	-	47
\$20 and over, ...	11	-	11	14	-	14
TOTALS, ...	680	-	680	639	-	639

ARMS AND AMMUNITION. [12 Establishments.]

Under \$5, ...	201	2	203	200	7	207
\$5 but under \$6, ...	101	-	101	106	2	108
\$6 but under \$7, ...	132	6	138	143	10	153
\$7 but under \$8, ...	174	20	194	181	16	197
\$8 but under \$9, ...	128	10	138	128	19	147
\$9 but under \$10, ...	179	36	215	182	44	226
\$10 but under \$12, ...	207	77	284	222	44	266
\$12 but under \$15, ...	258	20	278	263	1	264
\$15 but under \$20, ...	225	-	225	221	1	222
\$20 and over, ...	136	-	136	118	-	118
TOTALS, ...	1,741	171	1,912	1,764	144	1,908

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

ARTISANS' TOOLS. [72 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	100	20	120	127	14	141
\$5 but under \$6, ...	63	5	68	91	6	97
\$6 but under \$7, ...	136	18	154	104	12	116
\$7 but under \$8, ...	142	11	153	149	7	156
\$8 but under \$9, ...	163	4	167	137	11	148
\$9 but under \$10, ...	225	3	228	218	5	223
\$10 but under \$12, ...	296	—	296	341	—	341
\$12 but under \$15, ...	353	1	354	362	1	363
\$15 but under \$20, ...	344	—	344	284	—	284
\$20 and over, ...	122	—	122	122	—	122
TOTALS, ...	1,944	62	2,006	1,935	56	1,991

AWNINGS, SAILS, TENTS, ETC. [38 Establishments.]

Under \$5, ...	8	8	11	4	7	11
\$5 but under \$6, ...	6	6	12	5	1	6
\$6 but under \$7, ...	4	14	18	4	15	19
\$7 but under \$8, ...	4	15	19	5	11	16
\$8 but under \$9, ...	1	10	11	3	11	14
\$9 but under \$10, ...	5	3	8	3	6	14
\$10 but under \$12, ...	14	—	14	15	1	16
\$12 but under \$15, ...	44	3	47	48	1	49
\$15 but under \$20, ...	110	—	110	131	—	131
\$20 and over, ...	13	—	13	1	—	1
TOTALS, ...	204	59	263	224	53	277

BICYCLES, TRICYCLES, ETC. [14 Establishments.]

Under \$5, ...	143	9	152	105	10	115
\$5 but under \$6, ...	65	6	71	44	8	52
\$6 but under \$7, ...	101	7	108	100	14	114
\$7 but under \$8, ...	166	8	174	141	16	157
\$8 but under \$9, ...	158	32	190	162	32	194
\$9 but under \$10, ...	505	6	511	362	3	365
\$10 but under \$12, ...	560	6	566	456	3	459
\$12 but under \$15, ...	983	10	993	1,291	3	1,299
\$15 but under \$20, ...	664	7	671	653	4	657
\$20 and over, ...	181	—	181	252	—	252
TOTALS, ...	3,526	91	3,617	3,566	93	3,664

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

BOOTS AND SHOES. [675 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	2,192	3,247	5,439	2,624	3,620	6,244
\$5 but under \$6, ...	1,357	1,761	3,118	1,623	2,108	3,731
\$6 but under \$7, ...	1,977	2,051	4,028	2,215	2,290	4,505
\$7 but under \$8, ...	2,250	1,996	4,246	2,349	2,257	4,606
\$8 but under \$9, ...	2,551	1,787	4,338	2,602	1,979	4,581
\$9 but under \$10, ...	3,427	1,885	5,312	3,525	1,920	5,445
\$10 but under \$12, ...	5,568	2,336	7,904	6,128	2,092	8,220
\$12 but under \$15, ...	8,288	1,538	9,826	8,657	1,531	10,188
\$15 but under \$20, ...	7,065	617	7,682	6,508	412	6,920
\$20 and over, ...	2,618	42	2,655	2,201	59	2,260
TOTALS, ...	37,288	17,280	54,568	38,432	18,268	56,700

BOXES, BARRELS, KEGS, ETC. [119 Establishments.]

Under \$5, ...	82	128	210	92	104	196
\$5 but under \$6, ...	64	61	125	54	81	135
\$6 but under \$7, ...	153	109	262	153	105	258
\$7 but under \$8, ...	230	49	279	251	65	316
\$8 but under \$9, ...	289	46	335	265	49	314
\$9 but under \$10, ...	493	39	532	512	31	543
\$10 but under \$12, ...	434	32	466	473	30	503
\$12 but under \$15, ...	407	23	430	385	15	400
\$15 but under \$20, ...	139	2	141	147	3	150
\$20 and over, ...	28	-	28	28	-	28
TOTALS, ...	2,319	489	2,808	2,360	483	2,843

BOXES (PAPER) AND PAPER GOODS. [86 Establishments.]

Under \$5, ...	117	893	1,010	164	885	1,049
\$5 but under \$6, ...	72	574	646	92	524	616
\$6 but under \$7, ...	85	521	606	95	513	613
\$7 but under \$8, ...	98	449	547	103	450	553
\$8 but under \$9, ...	106	198	304	96	245	341
\$9 but under \$10, ...	157	137	294	173	151	324
\$10 but under \$12, ...	213	75	288	227	120	347
\$12 but under \$15, ...	258	31	289	233	42	325
\$15 but under \$20, ...	219	6	225	257	12	269
\$20 and over, ...	46	1	47	47	4	51
TOTALS, ...	1,371	2,885	4,256	1,537	2,961	4,488

WAGES PAID: BY INDUSTRIES—Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES—1896, 1897
—Continued.

BRICK, TILES, AND SEWER PIPE. [61 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	124	2	126	158	1	159
\$5 but under \$6, ...	87	3	90	90	—	90
\$6 but under \$7, ...	117	2	119	144	2	146
\$7 but under \$8, ...	201	—	201	198	1	199
\$8 but under \$9, ...	380	—	380	386	1	387
\$9 but under \$10, ...	751	—	751	679	—	679
\$10 but under \$12, ...	555	—	555	564	—	564
\$12 but under \$15, ...	280	—	280	209	—	209
\$15 but under \$20, ...	109	—	109	90	—	90
\$20 and over, ...	32	—	32	30	—	30
TOTALS, ...	2,636	7	2,643	2,548	5	2,553

BROOMS, BRUSHES, AND MOPS. [21 Establishments.]

Under \$5, ...	84	204	288	87	247	334
\$5 but under \$6, ...	54	79	133	31	94	125
\$6 but under \$7, ...	30	29	59	30	38	68
\$7 but under \$8, ...	30	26	56	34	16	50
\$8 but under \$9, ...	18	6	24	16	9	25
\$9 but under \$10, ...	34	8	42	41	3	44
\$10 but under \$12, ...	37	6	43	44	2	46
\$12 but under \$15, ...	75	1	76	62	—	62
\$15 but under \$20, ...	78	—	78	66	—	66
\$20 and over, ...	30	—	30	11	—	11
TOTALS, ...	465	359	824	422	409	831

BUILDING MATERIALS. [28 Establishments.]

Under \$5, ...	14	4	18	11	1	12
\$5 but under \$6, ...	14	—	14	22	—	22
\$6 but under \$7, ...	24	2	26	19	1	20
\$7 but under \$8, ...	27	—	27	21	—	21
\$8 but under \$9, ...	18	—	18	34	—	34
\$9 but under \$10, ...	112	—	112	55	—	55
\$10 but under \$12, ...	57	—	57	78	—	78
\$12 but under \$15, ...	154	—	154	125	—	125
\$15 but under \$20, ...	149	—	149	151	—	151
\$20 and over, ...	19	—	19	15	—	15
TOTALS, ...	588	6	594	531	2	533

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

BURIAL CASES, CASKETS, COFFINS, ETC. [8 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	4	1	5	2	1	3
\$5 but under \$6, ...	6	—	6	3	—	3
\$6 but under \$7, ...	6	3	9	5	3	8
\$7 but under \$8, ...	9	—	9	7	—	7
\$8 but under \$9, ...	8	4	12	6	3	9
\$9 but under \$10, ...	11	5	16	12	10	22
\$10 but under \$12, ...	24	6	30	21	4	25
\$12 but under \$15, ...	50	3	53	54	4	58
\$15 but under \$20, ...	51	—	51	57	—	57
\$20 and over, ...	10	—	10	13	—	13
TOTALS, ...	179	22	201	180	25	205

BUTTONS AND DRESS TRIMMINGS. [14 Establishments.]

Under \$5, ...	45	181	226	54	246	300
\$5 but under \$6, ...	38	204	242	32	244	276
\$6 but under \$7, ...	44	89	133	43	75	118
\$7 but under \$8, ...	45	46	91	49	40	89
\$8 but under \$9, ...	35	10	45	54	22	76
\$9 but under \$10, ...	44	3	47	53	3	56
\$10 but under \$12, ...	53	1	54	59	1	60
\$12 but under \$15, ...	54	2	56	59	1	60
\$15 but under \$20, ...	30	—	30	32	—	32
\$20 and over, ...	9	—	9	7	—	7
TOTALS, ...	397	536	933	442	632	1,074

CARPETINGS. [12 Establishments.]

Under \$5, ...	365	600	965	377	640	1,017
\$5 but under \$6, ...	194	524	718	152	587	739
\$6 but under \$7, ...	233	404	637	237	417	654
\$7 but under \$8, ...	197	407	604	215	337	552
\$8 but under \$9, ...	244	255	499	232	184	416
\$9 but under \$10, ...	253	166	419	262	184	446
\$10 but under \$12, ...	301	144	445	305	179	484
\$12 but under \$15, ...	277	13	290	322	25	347
\$15 but under \$20, ...	205	—	205	208	—	208
\$20 and over, ...	67	—	67	71	—	71
TOTALS, ...	2,336	2,513	4,849	2,381	2,558	4,934

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

CARRIAGES AND WAGONS. [136 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	31	3	34	30	1	31
\$5 but under \$6, ...	29	5	34	23	2	25
\$6 but under \$7, ...	51	4	55	60	5	65
\$7 but under \$8, ...	83	7	90	94	6	100
\$8 but under \$9, ...	87	3	90	105	2	107
\$9 but under \$10, ...	270	4	274	249	3	252
\$10 but under \$12, ...	441	—	441	445	1	446
\$12 but under \$15, ...	775	2	777	683	—	683
\$15 but under \$20, ...	593	—	593	581	—	581
\$20 and over, ...	66	—	66	54	—	54
TOTALS, ...	2,426	28	2,454	2,324	20	2,344

CEMENT, KAOLIN, LIME, AND PLASTER. [9 Establishments.]

Under \$5, ...	2	—	2	1	—	1
\$5 but under \$6, ...	—	—	—	—	—	—
\$6 but under \$7, ...	—	—	—	1	—	1
\$7 but under \$8, ...	11	—	11	16	—	16
\$8 but under \$9, ...	4	—	4	—	—	—
\$9 but under \$10, ...	84	—	84	75	—	75
\$10 but under \$12, ...	3	—	3	4	—	4
\$12 but under \$15, ...	19	—	19	14	—	14
\$15 but under \$20, ...	10	—	10	14	—	14
\$20 and over, ...	—	—	—	—	—	—
TOTALS, ...	133	—	133	125	—	125

CHEMICAL PREPARATIONS (COMPOUNDED). [13 Establishments.]

Under \$5, ...	—	2	2	—	2	2
\$5 but under \$6, ...	3	2	5	—	1	1
\$6 but under \$7, ...	8	—	8	5	—	5
\$7 but under \$8, ...	10	—	10	10	1	11
\$8 but under \$9, ...	15	1	16	16	1	17
\$9 but under \$10, ...	145	1	146	178	—	178
\$10 but under \$12, ...	86	—	86	71	—	71
\$12 but under \$15, ...	87	—	87	112	—	112
\$15 but under \$20, ...	17	—	17	28	—	28
\$20 and over, ...	1	—	1	1	—	1
TOTALS, ...	372	6	378	421	5	426

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

CLOCKS, WATCHES, AND JEWELRY. [106 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	136	217	353	177	264	441
\$5 but under \$6, ...	118	267	385	165	277	442
\$6 but under \$7, ...	106	227	333	105	212	317
\$7 but under \$8, ...	195	245	440	215	254	469
\$8 but under \$9, ...	201	157	358	251	154	405
\$9 but under \$10, ...	222	118	340	208	147	355
\$10 but under \$12, ...	394	89	483	475	118	593
\$12 but under \$15, ...	598	41	639	624	27	651
\$15 but under \$20, ...	620	10	630	665	7	672
\$20 and over, ...	310	10	320	267	2	269
TOTALS, ...	2,900	1,381	4,281	3,152	1,462	4,614

CLOTHING. [155 Establishments.]

Under \$5, ...	159	1,320	1,479	273	1,664	1,937
\$5 but under \$6, ...	118	1,064	1,172	158	1,147	1,305
\$6 but under \$7, ...	187	1,239	1,426	207	1,252	1,459
\$7 but under \$8, ...	175	1,067	1,232	204	1,099	1,303
\$8 but under \$9, ...	228	927	1,155	210	897	1,107
\$9 but under \$10, ...	300	541	841	268	650	918
\$10 but under \$12, ...	392	404	796	312	538	850
\$12 but under \$15, ...	437	176	613	538	159	697
\$15 but under \$20, ...	487	49	536	513	40	553
\$20 and over, ...	392	80	472	381	12	393
TOTALS, ...	2,920	6,847	9,767	3,064	7,458	10,522

COOKING, LIGHTING, AND HEATING APPARATUS. [39 Establishments.]

Under \$5, ...	25	1	26	28	1	29
\$5 but under \$6, ...	20	-	20	24	-	24
\$6 but under \$7, ...	64	-	64	60	-	60
\$7 but under \$8, ...	74	-	74	68	-	68
\$8 but under \$9, ...	94	-	94	89	-	89
\$9 but under \$10, ...	257	-	257	265	-	265
\$10 but under \$12, ...	289	-	289	284	-	284
\$12 but under \$15, ...	435	-	435	449	-	449
\$15 but under \$20, ...	412	-	412	459	-	459
\$20 and over, ...	268	-	268	281	-	281
TOTALS, ...	1,938	1	1,939	2,007	1	2,008

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

CORDAGE AND TWINE. [27 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	141	547	688	156	555	711
\$5 but under \$6, ...	112	439	551	107	388	495
\$6 but under \$7, ...	180	196	376	173	163	336
\$7 but under \$8, ...	93	96	189	91	92	183
\$8 but under \$9, ...	574	83	607	541	54	595
\$9 but under \$10, ...	318	9	327	289	12	301
\$10 but under \$12, ...	108	10	118	104	11	115
\$12 but under \$15, ...	110	—	110	108	—	108
\$15 but under \$20, ...	94	—	94	81	—	81
\$20 and over, ...	19	—	19	13	—	13
TOTALS, ...	1,744	1,330	3,074	1,663	1,275	2,938

COTTON GOODS. [163 Establishments.]

Under \$5, ...	7,704	11,976	19,680	8,011	12,048	20,059
\$5 but under \$6, ...	4,998	8,580	13,578	5,151	8,717	13,868
\$6 but under \$7, ...	7,118	8,125	15,243	7,075	8,493	15,568
\$7 but under \$8, ...	5,377	6,680	12,057	5,324	6,425	11,749
\$8 but under \$9, ...	5,063	4,642	9,705	5,093	4,572	9,665
\$9 but under \$10, ...	3,496	1,487	4,983	3,647	1,448	5,095
\$10 but under \$12, ...	4,267	593	4,860	4,206	512	4,718
\$12 but under \$15, ...	2,335	52	2,387	2,527	45	2,572
\$15 but under \$20, ...	1,048	3	1,051	991	8	999
\$20 and over, ...	632	—	632	605	—	605
TOTALS, ...	42,038	42,138	84,176	42,630	42,268	84,898

CRAYONS, PENCILS, CRUCIBLES, ETC. [3 Establishments.]

Under \$5, ...	—	—	—	—	22	22
\$5 but under \$6, ...	—	15	15	—	4	4
\$6 but under \$7, ...	2	—	2	3	3	6
\$7 but under \$8, ...	1	—	1	3	1	4
\$8 but under \$9, ...	1	—	1	1	1	2
\$9 but under \$10, ...	5	—	5	11	—	11
\$10 but under \$12, ...	8	—	8	3	1	4
\$12 but under \$15, ...	1	—	1	1	—	1
\$15 but under \$20, ...	2	—	2	2	1	3
\$20 and over, ...	1	—	1	1	1	2
TOTALS, ...	21	15	36	25	34	59

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

DRUGS AND MEDICINES. [24 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	36	77	113	34	86	120
\$5 but under \$6, ...	21	90	111	26	150	176
\$6 but under \$7, ...	42	152	194	35	182	167
\$7 but under \$8, ...	56	53	109	53	66	119
\$8 but under \$9, ...	33	15	48	35	24	59
\$9 but under \$10, ...	64	7	71	66	10	76
\$10 but under \$12, ...	83	7	90	87	9	96
\$12 but under \$15, ...	65	1	66	66	4	70
\$15 but under \$20, ...	44	4	48	45	4	49
\$20 and over, ...	25	—	25	24	1	25
TOTALS, ...	469	406	875	471	486	957

DYESTUFFS. [6 Establishments.]

Under \$5, ...	1	—	1	1	—	1
\$5 but under \$6, ...	—	2	2	3	—	3
\$6 but under \$7, ...	1	10	11	1	11	12
\$7 but under \$8, ...	6	2	8	7	11	18
\$8 but under \$9, ...	9	1	10	18	11	29
\$9 but under \$10, ...	32	—	32	22	10	32
\$10 but under \$12, ...	38	—	38	32	—	32
\$12 but under \$15, ...	16	—	16	17	2	19
\$15 but under \$20, ...	4	—	4	4	—	4
\$20 and over, ...	1	—	1	—	—	—
TOTALS, ...	108	15	123	106	45	150

EARTHEN, PLASTER, AND STONE WARE. [7 Establishments.]

Under \$5, ...	11	11	22	7	23	30
\$5 but under \$6, ...	10	16	26	17	8	25
\$6 but under \$7, ...	24	5	29	11	2	13
\$7 but under \$8, ...	16	2	18	21	3	24
\$8 but under \$9, ...	19	1	20	10	2	12
\$9 but under \$10, ...	20	—	20	21	—	21
\$10 but under \$12, ...	19	—	19	50	—	50
\$12 but under \$15, ...	30	—	30	19	—	19
\$15 but under \$20, ...	33	—	33	24	—	24
\$20 and over, ...	11	—	11	4	—	4
TOTALS, ...	193	35	228	184	38	222

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

ELECTRICAL APPARATUS AND APPLIANCES. [20 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	153	143	296	196	203	399
\$5 but under \$6, ...	93	77	170	99	83	182
\$6 but under \$7, ...	106	52	158	124	59	183
\$7 but under \$8, ...	158	60	218	151	79	230
\$8 but under \$9, ...	217	96	313	191	77	268
\$9 but under \$10, ...	171	25	196	212	12	224
\$10 but under \$12, ...	418	3	421	402	3	405
\$12 but under \$15, ...	710	4	714	712	3	715
\$15 but under \$20, ...	492	—	492	335	—	335
\$20 and over, ...	100	—	100	97	—	97
TOTALS, ...	2,618	460	3,078	2,519	519	3,038

ELECTROPLATING. [12 Establishments.]

Under \$5, ...	11	—	11	8	—	8
\$5 but under \$6, ...	7	1	8	4	—	4
\$6 but under \$7, ...	9	—	9	18	3	21
\$7 but under \$8, ...	10	—	10	11	—	11
\$8 but under \$9, ...	10	—	10	7	1	8
\$9 but under \$10, ...	29	2	31	21	—	21
\$10 but under \$12, ...	19	1	20	22	2	24
\$12 but under \$15, ...	32	—	32	39	—	39
\$15 but under \$20, ...	42	—	42	26	—	26
\$20 and over, ...	22	—	22	28	—	28
TOTALS, ...	191	4	195	184	6	190

EMERY AND SAND PAPER AND CLOTH, ETC. [9 Establishments.]

Under \$5, ...	14	—	14	14	—	14
\$5 but under \$6, ...	6	—	6	11	—	11
\$6 but under \$7, ...	8	—	8	6	1	7
\$7 but under \$8, ...	8	—	8	9	—	9
\$8 but under \$9, ...	18	1	19	2	1	3
\$9 but under \$10, ...	46	—	46	43	—	43
\$10 but under \$12, ...	108	—	108	96	1	97
\$12 but under \$15, ...	36	1	37	38	—	38
\$15 but under \$20, ...	25	—	25	28	—	28
\$20 and over, ...	6	—	6	6	—	6
TOTALS, ...	275	2	277	253	3	256

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES—1896, 1897
— Continued.

FANCY ARTICLES, ETC. [20 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	14	105	119	15	129	144
\$5 but under \$6, ...	20	84	104	13	116	129
\$6 but under \$7, ...	16	80	96	23	82	105
\$7 but under \$8, ...	7	65	72	18	69	87
\$8 but under \$9, ...	12	14	26	19	14	33
\$9 but under \$10, ...	29	30	59	29	11	40
\$10 but under \$12, ...	27	9	36	17	26	43
\$12 but under \$15, ...	35	4	39	43	15	58
\$15 but under \$20, ...	18	1	19	18	1	19
\$20 and over, ...	2	-	2	2	-	2
TOTALS, ...	180	392	572	197	463	660

FERTILIZERS. [3 Establishments.]

Under \$5, ...	-	-	-	1	-	1
\$5 but under \$6, ...	-	-	-	1	-	1
\$6 but under \$7, ...	-	-	-	-	-	-
\$7 but under \$8, ...	2	-	2	-	-	-
\$8 but under \$9, ...	-	-	-	5	-	5
\$9 but under \$10, ...	1	-	1	2	-	2
\$10 but under \$12, ...	28	-	28	14	-	14
\$12 but under \$15, ...	11	-	11	13	-	13
\$15 but under \$20, ...	11	-	11	16	-	16
\$20 and over, ...	1	-	1	1	-	1
TOTALS, ...	54	-	54	53	-	53

FINE ARTS AND TAXIDERMY. [3 Establishments.]

Under \$5, ...	1	-	1	-	-	-
\$5 but under \$6, ...	1	1	2	1	1	2
\$6 but under \$7, ...	-	-	-	1	-	1
\$7 but under \$8, ...	-	-	-	-	-	-
\$8 but under \$9, ...	-	-	-	-	-	-
\$9 but under \$10, ...	2	-	2	3	-	3
\$10 but under \$12, ...	3	-	3	3	-	3
\$12 but under \$15, ...	4	-	4	4	-	4
\$15 but under \$20, ...	2	-	2	2	-	2
\$20 and over, ...	1	-	1	1	-	1
TOTALS, ...	14	1	15	15	1	16

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

FIREWORKS AND MATCHES. [4 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	1	14	15	6	13	19
\$5 but under \$6, ...	8	26	34	21	12	33
\$6 but under \$7, ...	10	5	15	6	5	11
\$7 but under \$8, ...	15	4	19	11	8	19
\$8 but under \$9, ...	7	—	7	1	—	1
\$9 but under \$10, ...	12	1	13	20	1	21
\$10 but under \$12, ...	8	—	8	10	—	10
\$12 but under \$15, ...	5	—	5	6	—	6
\$15 but under \$20, ...	7	—	7	8	—	8
\$20 and over, ...	6	—	6	3	—	3
TOTALS, ...	79	50	129	92	39	131

FLAX, HEMP, JUTE, AND LINEN GOODS. [8 Establishments.]

Under \$5, ...	98	349	447	99	334	433
\$5 but under \$6, ...	39	222	261	41	200	241
\$6 but under \$7, ...	81	114	195	55	133	188
\$7 but under \$8, ...	65	19	84	72	35	107
\$8 but under \$9, ...	44	4	48	53	5	58
\$9 but under \$10, ...	60	—	60	47	1	48
\$10 but under \$12, ...	31	—	31	43	—	43
\$12 but under \$15, ...	59	—	59	52	—	52
\$15 but under \$20, ...	27	—	27	20	—	20
\$20 and over, ...	5	—	5	6	—	6
TOTALS, ...	509	708	1,217	488	708	1,196

FOOD PREPARATIONS. [336 Establishments.]

Under \$5, ...	319	1,478	1,797	317	1,628	1,945
\$5 but under \$6, ...	239	497	736	299	538	837
\$6 but under \$7, ...	323	454	777	328	474	802
\$7 but under \$8, ...	524	128	652	501	150	651
\$8 but under \$9, ...	829	92	921	768	92	860
\$9 but under \$10, ...	978	42	1,020	1,211	38	1,249
\$10 but under \$12, ...	1,040	34	1,074	1,177	32	1,209
\$12 but under \$15, ...	1,423	15	1,438	1,408	12	1,420
\$15 but under \$20, ...	687	4	691	712	5	717
\$20 and over, ...	179	—	179	185	—	185
TOTALS, ...	6,541	2,744	9,285	6,906	2,969	9,875

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

FURNITURE. [182 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	316	97	413	202	90	292
\$5 but under \$6, ...	226	50	285	147	60	207
\$6 but under \$7, ...	209	144	353	237	185	422
\$7 but under \$8, ...	390	202	592	496	199	695
\$8 but under \$9, ...	383	68	451	381	70	451
\$9 but under \$10, ...	493	40	533	498	46	544
\$10 but under \$12, ...	875	18	893	848	23	871
\$12 but under \$15, ...	1,537	4	1,541	1,671	6	1,677
\$15 but under \$20, ...	624	1	625	674	-	674
\$20 and over, ...	116	-	116	110	-	110
TOTALS, ...	5,169	633	5,802	5,264	679	5,943

GLASS. [14 Establishments.]

Under \$5, ...	47	3	50	37	2	39
\$5 but under \$6, ...	18	8	26	25	8	33
\$6 but under \$7, ...	23	4	27	22	4	26
\$7 but under \$8, ...	18	1	19	10	2	12
\$8 but under \$9, ...	11	-	11	11	-	11
\$9 but under \$10, ...	16	-	16	19	-	19
\$10 but under \$12, ...	40	-	40	44	-	44
\$12 but under \$15, ...	48	-	48	55	-	55
\$15 but under \$20, ...	81	-	81	68	-	68
\$20 and over, ...	21	-	21	24	-	24
TOTALS, ...	323	16	339	315	16	331

GLUE, ISINGLASS, AND STARCH. [20 Establishments.]

Under \$5, ...	2	38	40	3	17	20
\$5 but under \$6, ...	8	3	11	4	14	18
\$6 but under \$7, ...	45	4	49	42	1	43
\$7 but under \$8, ...	84	25	109	88	21	109
\$8 but under \$9, ...	75	3	78	48	3	51
\$9 but under \$10, ...	151	1	152	149	1	150
\$10 but under \$12, ...	123	2	125	135	1	136
\$12 but under \$15, ...	39	1	40	38	-	38
\$15 but under \$20, ...	19	-	19	17	-	17
\$20 and over, ...	3	-	3	4	-	4
TOTALS, ...	549	77	626	528	53	586

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

HAIR WORK (ANIMAL AND HUMAN). [6 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	10	32	42	9	36	45
\$5 but under \$6, ...	1	32	33	1	32	33
\$6 but under \$7, ...	4	7	11	5	4	9
\$7 but under \$8, ...	7	2	9	7	2	9
\$8 but under \$9, ...	20	3	23	19	2	21
\$9 but under \$10, ...	20	2	22	16	2	18
\$10 but under \$12, ...	6	2	8	9	4	13
\$12 but under \$15, ...	3	1	4	4	—	4
\$15 but under \$20, ...	3	—	3	4	1	5
\$20 and over, ...	—	—	—	—	—	—
TOTALS, ...	74	81	155	74	83	157

HOSE: RUBBER, LINEN, ETC. [5 Establishments.]

Under \$5, ...	95	208	298	66	151	217
\$5 but under \$6, ...	50	50	100	30	40	70
\$6 but under \$7, ...	99	27	126	100	34	134
\$7 but under \$8, ...	137	12	149	154	20	174
\$8 but under \$9, ...	101	6	107	87	18	100
\$9 but under \$10, ...	108	6	109	99	20	109
\$10 but under \$12, ...	91	3	94	101	9	110
\$12 but under \$15, ...	78	—	78	84	2	86
\$15 but under \$20, ...	92	—	92	107	—	107
\$20 and over, ...	18	—	18	20	—	20
TOTALS, ...	864	316	1,180	838	289	1,127

HOSIERY AND KNIT GOODS. [38 Establishments.]

Under \$5, ...	385	1,837	2,222	372	1,886	2,258
\$5 but under \$6, ...	157	847	1,004	165	883	1,048
\$6 but under \$7, ...	345	688	1,033	354	710	1,064
\$7 but under \$8, ...	209	497	706	209	433	642
\$8 but under \$9, ...	159	253	412	158	220	378
\$9 but under \$10, ...	150	101	251	164	94	248
\$10 but under \$12, ...	218	50	268	195	43	238
\$12 but under \$15, ...	149	18	167	144	8	152
\$15 but under \$20, ...	94	1	95	78	2	80
\$20 and over, ...	38	—	38	38	—	38
TOTALS, ...	1,904	4,292	6,196	1,877	4,289	6,146

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

INK, MUCILAGE, AND PASTE [8 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	1	15	16	—	13	13
\$5 but under \$6, ...	5	6	11	4	8	12
\$6 but under \$7, ...	5	2	7	6	2	8
\$7 but under \$8, ...	2	1	3	2	2	4
\$8 but under \$9, ...	8	1	9	5	1	6
\$9 but under \$10, ...	6	1	7	6	1	7
\$10 but under \$12, ...	7	1	8	6	1	7
\$12 but under \$15, ...	5	—	5	8	—	8
\$15 but under \$20, ...	5	—	5	7	—	7
\$20 and over, ...	3	—	3	3	—	3
TOTALS, ...	47	27	74	47	28	75

IVORY, BONE, SHELL, AND HORN GOODS, ETC. [16 Establishments.]

Under \$5, ...	37	46	83	36	48	84
\$5 but under \$6, ...	30	51	81	31	40	71
\$6 but under \$7, ...	38	44	82	56	30	86
\$7 but under \$8, ...	69	24	93	93	17	110
\$8 but under \$9, ...	58	1	59	60	2	62
\$9 but under \$10, ...	130	3	133	149	3	152
\$10 but under \$12, ...	142	1	143	122	2	124
\$12 but under \$15, ...	114	2	116	100	1	101
\$15 but under \$20, ...	40	—	40	46	—	46
\$20 and over, ...	3	—	3	3	—	3
TOTALS, ...	661	172	833	696	143	839

LEATHER. [126 Establishments.]

Under \$5, ...	170	55	225	220	53	273
\$5 but under \$6, ...	205	27	232	195	17	212
\$6 but under \$7, ...	374	38	412	442	36	478
\$7 but under \$8, ...	602	11	613	687	15	702
\$8 but under \$9, ...	783	8	791	829	9	838
\$9 but under \$10, ...	1,763	2	1,765	1,760	8	1,768
\$10 but under \$12, ...	1,373	9	1,382	1,677	4	1,681
\$12 but under \$15, ...	1,016	2	1,018	1,068	2	1,070
\$15 but under \$20, ...	444	—	444	474	—	474
\$20 and over, ...	120	—	120	105	—	105
TOTALS, ...	7,350	152	7,502	7,457	144	7,601

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

LIQUORS AND BEVERAGES (NOT SPIRITUOUS). [20 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	6	—	6	9	—	9
\$5 but under \$6, ...	3	—	3	4	—	4
\$6 but under \$7, ...	7	—	7	11	—	11
\$7 but under \$8, ...	25	—	25	24	—	24
\$8 but under \$9, ...	6	—	6	6	—	6
\$9 but under \$10, ...	23	—	23	21	—	21
\$10 but under \$12, ...	29	—	29	32	—	32
\$12 but under \$15, ...	63	—	63	41	—	41
\$15 but under \$20, ...	26	—	26	19	—	19
\$20 and over, ...	2	—	2	1	—	1
TOTALS, ...	190	—	190	168	—	168

LIQUORS: MALT, DISTILLED, AND FERMENTED. [58 Establishments.]

Under \$5, ...	10	4	14	7	4	11
\$5 but under \$6, ...	12	—	12	9	—	9
\$6 but under \$7, ...	27	—	27	23	—	23
\$7 but under \$8, ...	35	3	38	42	2	44
\$8 but under \$9, ...	70	1	71	71	—	71
\$9 but under \$10, ...	171	—	171	111	—	111
\$10 but under \$12, ...	156	—	156	122	—	122
\$12 but under \$15, ...	415	—	415	414	—	414
\$15 but under \$20, ...	944	—	944	1,031	—	1,031
\$20 and over, ...	145	—	145	132	—	132
TOTALS, ...	1,985	8	1,993	1,962	6	1,968

LUMBER. [84 Establishments.]

Under \$5, ...	17	3	20	40	3	43
\$5 but under \$6, ...	12	1	13	18	—	18
\$6 but under \$7, ...	62	4	66	47	4	51
\$7 but under \$8, ...	107	—	107	121	1	122
\$8 but under \$9, ...	179	—	179	207	—	207
\$9 but under \$10, ...	255	—	255	209	—	209
\$10 but under \$12, ...	125	1	126	129	1	130
\$12 but under \$15, ...	129	—	129	100	—	100
\$15 but under \$20, ...	110	—	110	114	—	114
\$20 and over, ...	22	—	22	18	—	18
TOTALS, ...	1,018	9	1,027	1,003	9	1,012

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

MACHINES AND MACHINERY. [360 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	1,136	75	1,211	1,195	72	1,267
\$5 but under \$6, ...	788	83	871	862	82	944
\$6 but under \$7, ...	1,208	100	1,308	1,155	96	1,251
\$7 but under \$8, ...	1,905	43	1,948	1,743	48	1,791
\$8 but under \$9, ...	1,941	40	1,981	1,822	23	1,845
\$9 but under \$10, ...	2,523	23	2,546	2,273	23	2,296
\$10 but under \$12, ...	3,077	12	3,089	3,173	8	3,181
\$12 but under \$15, ...	4,511	4	4,515	4,308	1	4,304
\$15 but under \$20, ...	3,108	3	3,111	3,043	2	3,045
\$20 and over, ...	731	—	731	683	—	683
TOTALS, ...	20,928	383	21,311	20,252	355	20,607

METALS AND METALLIC GOODS. [384 Establishments.]

Under \$5, ...	868	494	1,362	874	508	1,377
\$5 but under \$6, ...	638	464	1,102	604	384	988
\$6 but under \$7, ...	964	337	1,301	972	431	1,403
\$7 but under \$8, ...	1,083	147	1,230	981	157	1,138
\$8 but under \$9, ...	967	67	1,034	1,033	45	1,078
\$9 but under \$10, ...	1,961	46	2,007	1,831	59	1,890
\$10 but under \$12, ...	2,071	42	2,113	2,065	49	2,114
\$12 but under \$15, ...	2,740	6	2,746	2,662	5	2,667
\$15 but under \$20, ...	2,347	2	2,349	2,389	6	2,395
\$20 and over, ...	655	—	655	714	3	717
TOTALS, ...	14,294	1,605	15,899	14,125	1,642	15,767

MIXED TEXTILES. [12 Establishments.]

Under \$5, ...	50	119	169	61	142	203
\$5 but under \$6, ...	30	51	81	37	51	88
\$6 but under \$7, ...	64	47	111	135	50	185
\$7 but under \$8, ...	176	19	195	178	17	195
\$8 but under \$9, ...	58	8	66	52	11	63
\$9 but under \$10, ...	64	5	69	113	9	122
\$10 but under \$12, ...	30	2	32	69	4	73
\$12 but under \$15, ...	49	—	49	41	—	41
\$15 but under \$20, ...	27	—	27	20	—	20
\$20 and over, ...	18	—	18	16	—	16
TOTALS, ...	566	251	817	722	284	1,006

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

MODELS, LASTS, AND PATTERNS. [44 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	19	1	20	12	2	14
\$5 but under \$6, ...	6	—	6	9	—	9
\$6 but under \$7, ...	16	—	16	16	—	16
\$7 but under \$8, ...	13	—	13	12	—	12
\$8 but under \$9, ...	23	—	23	20	—	20
\$9 but under \$10, ...	40	—	40	37	—	37
\$10 but under \$12, ...	50	—	50	62	—	62
\$12 but under \$15, ...	183	—	183	113	—	113
\$15 but under \$20, ...	160	—	160	176	—	176
\$20 and over, ...	91	—	91	82	—	82
TOTALS, ...	551	1	552	539	2	541

MUSICAL INSTRUMENTS AND MATERIALS. [64 Establishments.]

Under \$5, ...	84	40	124	174	34	208
\$5 but under \$6, ...	77	46	123	89	47	136
\$6 but under \$7, ...	110	11	121	127	40	167
\$7 but under \$8, ...	106	3	109	121	6	127
\$8 but under \$9, ...	107	6	113	119	4	123
\$9 but under \$10, ...	137	2	139	187	2	189
\$10 but under \$12, ...	288	4	292	368	—	368
\$12 but under \$15, ...	751	—	751	668	2	670
\$15 but under \$20, ...	760	—	760	763	—	763
\$20 and over, ...	207	—	207	194	—	194
TOTALS, ...	2,627	112	2,739	2,810	135	2,945

OILS AND ILLUMINATING FLUIDS. [8 Establishments.]

Under \$5, ...	7	1	8	9	1	10
\$5 but under \$6, ...	1	—	1	—	1	1
\$6 but under \$7, ...	3	9	12	4	8	12
\$7 but under \$8, ...	—	—	—	—	—	—
\$8 but under \$9, ...	2	—	2	2	—	2
\$9 but under \$10, ...	21	—	21	21	—	21
\$10 but under \$12, ...	33	—	33	44	—	44
\$12 but under \$15, ...	28	—	28	29	—	29
\$15 but under \$20, ...	11	—	11	6	—	6
\$20 and over, ...	2	—	2	—	—	—
TOTALS, ...	108	10	118	115	10	125

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

PAINTS, COLORS, AND CRUDE CHEMICALS. [23 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	3	3	6	4	3	7
\$5 but under \$6, ...	4	3	7	4	6	10
\$6 but under \$7, ...	5	1	6	6	1	7
\$7 but under \$8, ...	8	6	14	5	8	13
\$8 but under \$9, ...	6	1	7	6	—	6
\$9 but under \$10, ...	47	2	49	53	1	54
\$10 but under \$12, ...	48	1	49	55	1	56
\$12 but under \$15, ...	51	1	52	54	—	54
\$15 but under \$20, ...	22	—	22	19	—	19
\$20 and over, ...	15	—	15	15	—	15
TOTALS, ...	209	18	227	221	20	241

PAPER. [91 Establishments.]

Under \$5, ...	127	998	1,125	162	978	1,140
\$5 but under \$6, ...	129	1,036	1,165	107	995	1,102
\$6 but under \$7, ...	290	1,261	1,551	271	1,146	1,417
\$7 but under \$8, ...	590	342	932	612	485	1,097
\$8 but under \$9, ...	674	141	815	644	174	818
\$9 but under \$10, ...	1,387	61	1,448	1,385	88	1,473
\$10 but under \$12, ...	831	24	855	893	18	911
\$12 but under \$15, ...	898	10	908	948	18	966
\$15 but under \$20, ...	665	7	672	682	9	691
\$20 and over, ...	178	—	178	174	1	175
TOTALS, ...	5,769	3,880	9,649	5,878	3,912	9,790

PERFUMES, TOILET ARTICLES, ETC. [5 Establishments.]

Under \$5, ...	1	1	2	—	3	3
\$5 but under \$6, ...	2	5	7	2	6	8
\$6 but under \$7, ...	—	6	6	1	6	7
\$7 but under \$8, ...	1	2	3	—	1	1
\$8 but under \$9, ...	2	3	5	1	2	3
\$9 but under \$10, ...	—	1	1	1	1	2
\$10 but under \$12, ...	1	—	1	2	—	2
\$12 but under \$15, ...	2	—	2	1	—	1
\$15 but under \$20, ...	4	—	4	5	—	5
\$20 and over, ...	2	—	2	—	—	—
TOTALS, ...	15	18	33	13	19	32

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

PHOTOGRAPHS AND PHOTOGRAPHIC MATERIALS. [25 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	58	120	178	40	34	74
\$5 but under \$6, ...	9	20	29	27	36	63
\$6 but under \$7, ...	28	37	65	37	79	116
\$7 but under \$8, ...	24	15	39	20	13	33
\$8 but under \$9, ...	20	18	38	21	15	36
\$9 but under \$10, ...	35	16	51	33	12	50
\$10 but under \$12, ...	43	10	53	46	15	61
\$12 but under \$15, ...	61	8	69	52	8	60
\$15 but under \$20, ...	66	4	70	50	8	58
\$20 and over, ...	35	2	37	38	1	39
TOTALS, ...	379	250	629	369	221	590

POLISHES AND DRESSING. [28 Establishments.]

Under \$5, ...	1	72	73	8	89	97
\$5 but under \$6, ...	6	14	20	2	55	57
\$6 but under \$7, ...	2	32	34	6	29	35
\$7 but under \$8, ...	9	4	13	6	5	11
\$8 but under \$9, ...	5	1	6	2	7	9
\$9 but under \$10, ...	8	2	10	9	1	10
\$10 but under \$12, ...	27	1	28	24	1	25
\$12 but under \$15, ...	37	—	37	34	—	34
\$15 but under \$20, ...	30	—	30	38	—	38
\$20 and over, ...	9	—	9	8	—	8
TOTALS, ...	134	126	260	187	187	324

PRINTING, PUBLISHING, AND BOOKBINDING. [55 Establishments.]

Under \$5, ...	216	337	553	260	300	560
\$5 but under \$6, ...	108	152	260	105	177	282
\$6 but under \$7, ...	110	201	311	102	224	326
\$7 but under \$8, ...	76	165	241	77	190	267
\$8 but under \$9, ...	85	122	207	77	127	204
\$9 but under \$10, ...	123	75	198	119	67	186
\$10 but under \$12, ...	217	70	287	234	89	323
\$12 but under \$15, ...	351	31	382	357	17	374
\$15 but under \$20, ...	424	11	435	393	8	401
\$20 and over, ...	306	2	308	320	2	322
TOTALS, ...	2,016	1,166	3,182	2,044	1,201	3,245

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

PRINT WORKS, DYE WORKS, AND BLEACHERIES. [49 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	629	387	1,016	596	319	905
\$5 but under \$6, ...	408	529	937	443	456	899
\$6 but under \$7, ...	844	358	1,202	874	512	1,386
\$7 but under \$8, ...	1,390	98	1,488	1,383	136	1,519
\$8 but under \$9, ...	712	80	742	632	36	668
\$9 but under \$10, ...	540	51	591	559	23	582
\$10 but under \$12, ...	477	7	484	452	21	473
\$12 but under \$15, ...	352	3	355	375	4	379
\$15 but under \$20, ...	191	—	191	174	—	174
\$20 and over, ...	289	—	289	281	—	281
TOTALS, ...	5,832	1,458	7,290	5,759	1,507	7,266

RAILROAD CONSTRUCTION AND EQUIPMENT. [15 Establishments.]

Under \$5, ...	5	—	5	29	—	29
\$5 but under \$6, ...	34	—	34	56	—	56
\$6 but under \$7, ...	27	—	27	91	—	91
\$7 but under \$8, ...	97	—	97	81	—	81
\$8 but under \$9, ...	356	—	356	227	—	227
\$9 but under \$10, ...	520	—	520	448	—	448
\$10 but under \$12, ...	634	—	634	491	—	491
\$12 but under \$15, ...	1,290	—	1,290	1,161	—	1,161
\$15 but under \$20, ...	396	—	396	399	—	399
\$20 and over, ...	35	—	35	33	—	33
TOTALS, ...	3,394	—	3,394	3,016	—	3,016

RUBBER AND ELASTIC GOODS. [41 Establishments.]

Under \$5, ...	232	675	907	223	616	839
\$5 but under \$6, ...	151	386	537	158	392	550
\$6 but under \$7, ...	178	521	699	230	707	937
\$7 but under \$8, ...	364	689	1,053	374	724	1,098
\$8 but under \$9, ...	506	538	1,044	485	706	1,191
\$9 but under \$10, ...	854	646	1,500	960	359	1,319
\$10 but under \$12, ...	718	298	1,016	669	234	903
\$12 but under \$15, ...	945	89	1,034	784	89	873
\$15 but under \$20, ...	582	10	592	350	14	364
\$20 and over, ...	123	1	124	113	1	114
TOTALS, ...	4,653	3,853	8,506	4,346	3,842	8,188

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

SADDLERY AND HARNESS. [86 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	6	16	22	5	14	19
\$5 but under \$6, ...	2	9	11	4	8	12
\$6 but under \$7, ...	2	28	30	7	20	27
\$7 but under \$8, ...	22	31	53	15	31	46
\$8 but under \$9, ...	20	9	29	15	13	28
\$9 but under \$10, ...	51	14	65	70	12	82
\$10 but under \$12, ...	91	6	97	74	5	79
\$12 but under \$15, ...	72	2	74	90	3	93
\$15 but under \$20, ...	67	—	67	54	1	55
\$20 and over, ...	9	—	9	11	—	11
TOTALS, ...	342	115	457	346	107	452

SCIENTIFIC INSTRUMENTS AND APPLIANCES. [20 Establishments.]

Under \$5, ...	99	47	146	149	107	256
\$5 but under \$6, ...	110	69	179	73	42	115
\$6 but under \$7, ...	121	61	182	117	57	174
\$7 but under \$8, ...	111	10	121	119	14	133
\$8 but under \$9, ...	92	4	96	117	8	125
\$9 but under \$10, ...	186	3	189	171	4	175
\$10 but under \$12, ...	142	4	146	183	4	187
\$12 but under \$15, ...	161	1	162	164	1	165
\$15 but under \$20, ...	149	—	149	112	—	112
\$20 and over, ...	51	—	51	51	—	51
TOTALS, ...	1,222	199	1,421	1,256	237	1,493

SHIPBUILDING. [47 Establishments.]

Under \$5, ...	127	—	127	30	—	30
\$5 but under \$6, ...	33	—	33	14	—	14
\$6 but under \$7, ...	33	—	33	35	—	35
\$7 but under \$8, ...	50	—	50	64	—	64
\$8 but under \$9, ...	59	—	59	59	—	59
\$9 but under \$10, ...	168	—	168	173	—	173
\$10 but under \$12, ...	202	—	202	163	—	163
\$12 but under \$15, ...	294	—	294	271	—	271
\$15 but under \$20, ...	508	—	508	453	—	453
\$20 and over, ...	42	—	42	33	—	33
TOTALS, ...	1,516	—	1,516	1,295	—	1,295

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

SILK AND SILK GOODS. [9 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	50	271	321	61	290	350
\$5 but under \$6, ...	57	330	387	56	279	335
\$6 but under \$7, ...	91	290	381	79	268	347
\$7 but under \$8, ...	59	117	176	56	118	174
\$8 but under \$9, ...	51	81	132	67	94	161
\$9 but under \$10, ...	67	77	144	79	73	152
\$10 but under \$12, ...	136	62	198	142	66	208
\$12 but under \$15, ...	77	8	85	77	15	92
\$15 but under \$20, ...	55	—	55	55	—	55
\$20 and over, ...	22	—	22	22	—	22
TOTALS, ...	665	1,236	1,901	694	1,212	1,906

SPORTING AND ATHLETIC GOODS. [5 Establishments.]

Under \$5, ...	22	17	39	16	14	30
\$5 but under \$6, ...	6	8	14	9	15	24
\$6 but under \$7, ...	22	5	27	12	6	18
\$7 but under \$8, ...	24	9	33	17	6	23
\$8 but under \$9, ...	25	4	29	24	2	26
\$9 but under \$10, ...	21	1	22	20	1	21
\$10 but under \$12, ...	32	—	32	38	—	38
\$12 but under \$15, ...	72	—	72	59	—	59
\$15 but under \$20, ...	38	—	38	26	—	26
\$20 and over, ...	6	—	6	2	—	2
TOTALS, ...	268	44	312	223	44	267

STONE. [202 Establishments.]

Under \$5, ...	133	—	133	115	—	115
\$5 but under \$6, ...	119	—	119	84	—	84
\$6 but under \$7, ...	214	—	214	189	—	189
\$7 but under \$8, ...	305	—	305	279	—	279
\$8 but under \$9, ...	394	—	394	318	—	318
\$9 but under \$10, ...	999	—	999	964	—	964
\$10 but under \$12, ...	1,230	—	1,230	1,068	—	1,068
\$12 but under \$15, ...	1,183	—	1,183	1,198	—	1,198
\$15 but under \$20, ...	1,625	—	1,625	1,565	—	1,565
\$20 and over, ...	228	—	228	164	—	164
TOTALS, ...	6,430	—	6,430	5,944	—	5,944

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

STRAW AND PALM LEAF GOODS. [16 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	18	304	322	30	283	313
\$5 but under \$6, ...	40	259	299	36	264	300
\$6 but under \$7, ...	83	345	428	74	262	336
\$7 but under \$8, ...	146	403	549	129	336	465
\$8 but under \$9, ...	174	326	500	129	406	535
\$9 but under \$10, ...	291	395	686	278	367	645
\$10 but under \$12, ...	176	227	403	300	342	642
\$12 but under \$15, ...	213	190	403	236	309	545
\$15 but under \$20, ...	153	80	233	171	149	320
\$20 and over, ...	34	20	54	50	49	99
TOTALS, ...	1,328	2,549	3,877	1,433	2,767	4,200

TALLOW, CANDLES, SOAP, AND GREASE. [64 Establishments.]

Under \$5, ...	21	65	86	17	43	60
\$5 but under \$6, ...	9	12	21	15	24	39
\$6 but under \$7, ...	17	11	28	16	6	22
\$7 but under \$8, ...	42	6	48	45	5	50
\$8 but under \$9, ...	23	—	23	34	—	34
\$9 but under \$10, ...	208	—	208	178	—	178
\$10 but under \$12, ...	177	1	178	185	1	186
\$12 but under \$15, ...	127	—	127	108	—	108
\$15 but under \$20, ...	67	—	67	65	—	65
\$20 and over, ...	18	—	18	16	—	16
TOTALS, ...	709	95	804	679	79	758

TOBACCO, SNUFF, AND CIGARS. [58 Establishments.]

Under \$5, ...	50	123	173	49	130	179
\$5 but under \$6, ...	25	124	149	19	121	140
\$6 but under \$7, ...	17	170	187	28	143	171
\$7 but under \$8, ...	17	81	98	29	67	96
\$8 but under \$9, ...	29	25	54	30	26	56
\$9 but under \$10, ...	61	15	76	59	9	68
\$10 but under \$12, ...	157	23	180	126	32	158
\$12 but under \$15, ...	345	40	385	385	41	426
\$15 but under \$20, ...	514	6	520	501	13	514
\$20 and over, ...	287	2	289	268	—	268
TOTALS, ...	1,502	609	2,111	1,494	582	2,076

WAGES PAID: BY INDUSTRIES — Continued.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Continued.

TOYS AND GAMES (CHILDREN'S). [9 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	42	29	71	50	31	81
\$5 but under \$6, ...	41	15	56	48	23	71
\$6 but under \$7, ...	44	24	68	65	28	93
\$7 but under \$8, ...	60	17	77	65	12	77
\$8 but under \$9, ...	52	14	66	43	8	51
\$9 but under \$10, ...	54	4	58	55	5	60
\$10 but under \$12, ...	51	3	54	41	4	45
\$12 but under \$15, ...	39	—	39	40	—	40
\$15 but under \$20, ...	13	—	13	23	—	23
\$20 and over, ...	10	—	10	8	—	8
TOTALS, ...	406	106	512	443	111	554

TRUNKS AND VALISES. [7 Establishments.]

Under \$5, ...	8	—	8	8	2	10
\$5 but under \$6, ...	3	4	7	—	—	—
\$6 but under \$7, ...	2	3	5	3	2	5
\$7 but under \$8, ...	6	—	6	9	3	12
\$8 but under \$9, ...	—	—	—	—	—	—
\$9 but under \$10, ...	14	—	14	6	—	6
\$10 but under \$12, ...	13	1	14	15	1	16
\$12 but under \$15, ...	19	—	19	20	—	20
\$15 but under \$20, ...	15	—	15	13	—	13
\$20 and over, ...	1	—	1	1	—	1
TOTALS, ...	81	8	89	75	8	83

WHIPS, LASHES, AND STOCKS. [14 Establishments.]

Under \$5, ...	28	13	41	37	29	66
\$5 but under \$6, ...	25	45	70	11	36	47
\$6 but under \$7, ...	10	31	41	23	14	37
\$7 but under \$8, ...	41	19	60	22	27	49
\$8 but under \$9, ...	75	20	95	56	17	73
\$9 but under \$10, ...	28	4	32	36	7	43
\$10 but under \$12, ...	55	1	56	65	10	75
\$12 but under \$15, ...	33	—	33	39	—	39
\$15 but under \$20, ...	23	—	23	21	—	21
\$20 and over, ...	5	—	5	4	—	4
TOTALS, ...	323	133	456	314	140	454

WAGES PAID: BY INDUSTRIES — Continued.
 CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
 — Continued.

WOODEN GOODS. [107 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	106	15	121	86	14	100
\$5 but under \$6, ...	51	8	59	45	9	54
\$6 but under \$7, ...	93	15	108	103	15	118
\$7 but under \$8, ...	144	7	151	168	12	180
\$8 but under \$9, ...	178	6	184	167	8	175
\$9 but under \$10, ...	326	2	328	304	3	307
\$10 but under \$12, ...	253	5	258	278	6	284
\$12 but under \$15, ...	458	2	460	440	4	444
\$15 but under \$20, ...	480	8	488	432	4	436
\$20 and over, ...	70	4	74	62	3	65
TOTALS, ...	2,159	72	2,231	2,085	78	2,163

WOOLLEN GOODS. [117 Establishments.]

Under \$5, ...	1,051	1,670	2,721	1,166	1,699	2,865
\$5 but under \$6, ...	828	1,221	2,049	935	1,346	2,281
\$6 but under \$7, ...	2,123	1,444	3,567	1,996	1,433	3,429
\$7 but under \$8, ...	1,970	1,215	3,185	2,044	1,151	3,195
\$8 but under \$9, ...	1,451	604	2,055	1,426	777	2,203
\$9 but under \$10, ...	1,451	352	1,803	1,531	372	1,903
\$10 but under \$12, ...	1,215	197	1,412	1,325	200	1,525
\$12 but under \$15, ...	754	50	804	886	61	947
\$15 but under \$20, ...	385	1	386	373	4	377
\$20 and over, ...	181	—	181	188	—	188
TOTALS, ...	11,409	6,754	18,163	11,870	7,043	18,913

WORSTED GOODS. [81 Establishments.]

Under \$5, ...	671	1,496	2,167	737	1,346	2,083
\$5 but under \$6, ...	747	1,858	2,605	743	1,373	2,616
\$6 but under \$7, ...	1,097	1,476	2,573	1,096	1,553	2,749
\$7 but under \$8, ...	1,234	610	1,844	1,263	632	1,895
\$8 but under \$9, ...	577	352	929	623	368	991
\$9 but under \$10, ...	654	231	885	748	232	980
\$10 but under \$12, ...	996	163	1,159	1,130	223	1,353
\$12 but under \$15, ...	648	24	672	777	35	812
\$15 but under \$20, ...	170	3	173	196	5	201
\$20 and over, ...	97	2	99	101	2	103
TOTALS, ...	6,891	6,215	13,106	7,414	6,369	13,783

WAGES PAID: BY INDUSTRIES — Concluded.

CLASSIFIED WEEKLY EARNINGS: BY INDUSTRIES — 1896, 1897
— Concluded.

ALL INDUSTRIES. [4,695 Establishments.]

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	19,317	31,264	50,581	20,596	32,166	52,762
\$5 but under \$6, ...	13,198	22,445	35,643	13,752	23,129	36,881
\$6 but under \$7, ...	20,472	21,704	42,176	20,846	22,776	43,622
\$7 but under \$8, ...	22,320	16,276	38,596	22,524	16,433	38,957
\$8 but under \$9, ...	22,154	11,113	33,267	21,731	11,670	33,401
\$9 but under \$10, ...	28,940	6,742	35,682	28,979	6,598	35,577
\$10 but under \$12, ...	33,403	5,084	38,487	34,106	5,162	39,268
\$12 but under \$15, ...	39,189	2,438	41,627	39,809	2,528	42,337
\$15 but under \$20, ...	29,651	840	30,491	28,635	724	29,359
\$20 and over, ...	9,613	166	9,779	9,000	141	9,141
TOTALS, ...	238,257	118,072	356,329	239,978	121,317	361,295

PROPORTION OF BUSINESS DONE
AND
DAYS IN OPERATION:
BY INDUSTRIES.

PROPORTION OF BUSINESS DONE: BY INDUSTRIES.

1896, 1897.

[The figures given in this presentation represent the average proportion of business done by each establishment in the industries considered. Greatest capacity, or maximum production, has been considered as 100 per cent, and the percentages given indicate the average proportion of business done by each establishment during each year on the basis stated. Comparison is made between 1896 and 1897, and the relative increase or decrease in 1897 as compared with 1896 is given with its equivalent percentage.]

INDUSTRIES.	Number of Estab- lishments Con- sidered	AVERAGE PRO- PORTION OF BUSINESS DONE		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Proportion	Percent- ages
Agricultural implements, ...	9	59.44	54.22	-5.22	-8.78
Arms and ammunition, ...	12	49.67	48.08	-1.59	-3.20
Artisans' tools, ...	72	50.69	53.57	+2.88	+5.68
Awnings, sails, tents, etc., ...	38	44.79	42.13	-2.66	-5.94
Bicycles, tricycles, etc., ...	14	64.79	58.36	-11.43	-17.64
Boots and shoes, ...	675	60.40	59.78	-0.62	-1.03
Boxes, barrels, kegs, etc., ...	119	57.56	57.71	+0.15	+0.26
Boxes (paper) and paper goods, ...	86	63.99	65.35	+1.36	+2.13
Brick, tiles, and sewer pipe, ...	61	67.66	64.26	-3.40	-5.03
Brooms, brushes, and mops, ...	21	60.71	56.57	-4.14	-6.82
Building materials, ...	28	57.79	52.93	-4.86	-8.41
Burial cases, caskets, coffins, etc., ...	8	77.50	71.13	-6.37	-8.22
Buttons and dress trimmings, ...	14	37.29	47.14	+9.85	+26.41
Carpetings, ...	12	68.83	67.83	-1.50	-2.18
Carriages and wagons, ...	136	58.49	55.82	-2.67	-4.56
Cement, kaolin, lime, and plaster, ...	9	61.89	56.78	-5.11	-8.26
Chemical preparations (compounded), ...	13	55.15	58.23	+3.08	+5.58
Clocks, watches, and jewelry, ...	106	53.33	56.13	+2.80	+5.25
Clothing, ...	155	61.65	64.21	+2.56	+4.15
Cooking, lighting, and heating apparatus, ...	39	63.41	61.00	-2.41	-3.80
Cordage and twine, ...	27	65.78	62.93	-2.85	-4.33
Cotton goods, ...	163	79.52	81.90	+2.38	+2.99
Crayons, pencils, crucibles, etc., ...	3	56.67	73.33	+16.66	+29.40
Drugs and medicines, ...	24	49.21	47.04	-2.17	-4.41
Dyestuffs, ...	6	43.67	52.83	+9.16	+20.98
Earthen, plaster, and stone ware, ...	7	58.00	52.29	-5.71	-9.84
Electrical apparatus and appliances, ...	20	62.80	60.50	-2.30	-3.66
Electroplating, ...	12	54.42	55.00	+0.58	+1.07
Emery and sand paper and cloth, etc., ...	9	58.11	65.89	+7.78	+13.39
Fancy articles, etc., ...	20	58.35	66.25	+7.90	+13.54
Fertilizers, ...	3	56.67	52.33	-4.34	-7.66

PROPORTION OF BUSINESS DONE: BY INDUSTRIES—1896,
1897—Concluded.

INDUSTRIES.	Number of Estab- lishments Con- sidered	AVERAGE PRO- PORTION OF BUSINESS DONE		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Proportion	Percent- ages
Fine arts and taxidermy, ...	3	75.00	71.67	-3.33	-4.44
Fireworks and matches, ...	4	65.00	55.75	-9.25	-14.23
Flax, hemp, jute, and linen goods, ...	8	70.13	69.50	-0.63	-0.90
Food preparations, ...	336	61.33	60.41	-0.92	-1.50
Furniture, ...	132	55.99	56.56	+0.57	+1.02
Glass, ...	14	47.50	56.43	+8.93	+18.80
Glue, isinglass, and starch, ...	20	65.45	64.20	-1.25	-1.91
Hair work (animal and human), ...	6	55.00	57.00	+2.00	+3.64
Hose: rubber, linen, etc., ...	5	51.00	52.40	+1.40	+2.75
Hosiery and knit goods, ...	38	55.79	57.11	+1.32	+2.37
Ink, mucilage, and paste, ...	8	52.88	47.25	-5.63	-10.65
Ivory, bone, shell, and horn goods, etc., ...	16	64.75	69.81	+5.06	+7.81
Leather, ...	126	61.06	60.93	-0.13	-0.21
Liquors and beverages (not spirituous), ...	20	48.30	49.05	+0.75	+1.55
Liquors: malt, distilled, and fermented, ...	58	59.21	55.62	-3.59	-6.06
Lumber, ...	34	59.56	61.56	+2.00	+3.36
Machines and machinery, ...	360	57.54	54.26	-3.28	-5.70
Metals and metallic goods, ...	384	59.26	57.54	-1.72	-2.90
Mixed textiles, ...	12	68.17	74.50	+6.33	+9.29
Models, lasts, and patterns, ...	44	58.75	51.43	-7.32	-12.46
Musical instruments and materials, ...	64	53.89	53.94	+0.05	+0.09
Oils and illuminating fluids, ...	8	60.00	60.63	+0.63	+1.05
Paints, colors, and crude chemicals, ...	23	55.13	51.65	-3.48	-6.31
Paper, ...	91	73.81	75.32	+1.51	+2.05
Perfumes, toilet articles, etc., ...	5	42.00	31.80	-10.20	-24.29
Photographs and photographic materials, ...	25	56.36	51.32	-5.04	-8.94
Polishes and dressing, ...	28	54.39	54.11	-0.28	-0.51
Printing, publishing, and bookbinding, ...	55	60.51	66.40	+5.89	+9.73
Print works, dye works, and bleacheries, ...	49	59.88	61.49	+1.61	+2.69
Railroad construction and equipment, ...	15	84.33	75.73	-8.60	-10.20
Rubber and elastic goods, ...	41	61.20	64.80	+3.60	+5.88
Saddlery and harness, ...	36	53.89	54.39	+0.50	+0.93
Scientific instruments and appliances, ...	20	66.60	64.15	-2.45	-3.68
Shipbuilding, ...	47	45.11	41.06	-3.45	-7.65
Silk and silk goods, ...	9	56.22	72.99	+16.67	+29.65
Sporting and athletic goods, ...	5	51.80	46.00	-5.80	-11.20
Stone, ...	202	54.32	52.25	-2.07	-3.81
Straw and palm leaf goods, ...	16	71.88	72.00	+0.62	+0.87
Tallow, candles, soap, and grease, ...	64	58.27	57.27	-1.00	-1.72
Tobacco, snuff, and cigars, ...	58	56.76	55.50	-1.26	-2.22
Toys and games (children's), ...	9	62.22	62.00	-0.22	-0.35
Trunks and valises, ...	7	47.00	51.14	+4.14	+8.81
Whips, lashes, and stocks, ...	14	63.07	69.71	+6.64	+10.53
Wooden goods, ...	107	56.22	54.51	-1.71	-3.04
Woollen goods, ...	117	70.80	78.58	+7.78	+11.75
Worsted goods, ...	31	68.90	84.94	+16.04	+23.28
ALL INDUSTRIES, ...	4,695	59.99	59.72	-0.27	-0.45

DAYS IN OPERATION: BY INDUSTRIES.

1896, 1897.

[The figures given in this presentation represent the average number of days each person was employed in the industries considered during the years 1896 and 1897. The average number of days in operation is based upon the average number of persons employed, the number of days per establishment being multiplied by the figures representing the average number of persons, and the sum divided by the aggregate average number of persons, an average for each industry and for All Industries being thus obtained. Comparison is made between 1896 and 1897, and the relative increase or decrease in 1897 as compared with 1896 is given with its equivalent percentage.]

INDUSTRIES.	Number of Estab- lishments Con- sidered	AVERAGE NUMBER OF DAYS IN OPERATION		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Days	Per- centages
Agricultural implements, ...	9	270.75	268.59	-2.16	-0.80
Arms and ammunition, ...	12	295.03	265.54	-29.49	-10.00
Artisans' tools, ...	72	283.06	283.97	+0.91	+0.32
Awnings, sails, tents, etc., ...	38	278.82	282.70	+3.88	+1.39
Bicycles, tricycles, etc., ...	14	304.25	298.38	-5.87	-1.93
Boots and shoes, ...	675	284.66	284.74	+0.08	+0.03
Boxes, barrels, kegs, etc., ...	119	277.63	279.16	+1.53	+0.55
Boxes (paper) and paper goods, ...	86	288.97	289.59	+0.62	+0.21
Brick, tiles, and sewer pipe, ...	61	230.81	223.31	-7.50	-3.25
Brooms, brushes, and mops, ...	21	254.65	267.68	+13.03	+5.12
Building materials, ...	28	298.15	299.41	+1.26	+0.42
Burial cases, caskets, coffins, etc., ...	8	299.31	298.81	-0.50	-0.17
Buttons and dress trimmings, ...	14	248.16	282.65	+34.49	+13.90
Carpetings, ...	12	244.64	243.77	-0.87	-0.36
Carriages and wagons, ...	136	281.36	284.60	+3.24	+1.15
Cement, kaolin, lime, and plaster, ...	9	291.73	288.35	-3.38	-1.16
Chemical preparations (compounded), ...	13	295.98	299.61	+3.63	+1.23
Clocks, watches, and jewelry, ...	106	263.41	276.63	+13.22	+5.02
Clothing, ...	165	282.82	289.98	+7.16	+2.53
Cooking, lighting, and heating apparatus, ...	39	261.93	256.46	-5.47	-2.09
Cordage and twine, ...	27	283.01	265.10	-17.91	-6.33
Cotton goods, ...	163	279.92	285.15	+5.23	+1.87
Crayons, pencils, crucibles, etc., ...	3	297.63	299.44	+1.81	+0.61
Drugs and medicines, ...	24	299.30	299.92	+0.62	+0.21
Dyestuffs, ...	6	235.01	270.80	+35.79	+15.23
Earthen, plaster, and stone ware, ...	7	290.27	270.91	-19.36	-6.67
Electrical apparatus and appliances, ...	20	298.48	299.94	+1.46	+0.49
Electroplating, ...	12	290.62	304.95	+14.33	+4.93
Emery and sand paper and cloth, etc., ...	9	291.65	292.59	+0.94	+0.32
Fancy articles, etc., ...	20	288.12	289.00	+0.88	+0.31
Fertilizers, ...	3	306.86	306.86	=	=

* No change.

DAYS IN OPERATION: BY INDUSTRIES — 1896, 1897

— Concluded.

INDUSTRIES.	Number of Estab- lishments Con- sidered	AVERAGE NUMBER OF DAYS IN OPERATION		INCREASE (+) OR DECREASE (—) IN 1897	
		1896	1897	Days	Per- centages
Fine arts and taxidermy, ...	8	303.27	303.23	—0.04	—0.01
Fireworks and matches, ...	4	295.44	270.16	—25.28	—8.56
Flax, hemp, jute, and linen goods, ...	8	258.47	280.48	+21.96	+8.50
Food preparations, ...	336	299.61	299.18	—0.43	—0.14
Furniture, ...	132	294.37	293.55	—0.82	—0.28
Glass, ...	14	256.06	275.38	+19.32	+7.55
Glue, isinglass, and starch, ...	20	240.52	246.08	+5.56	+2.31
Hair work (animal and human), ...	6	263.34	233.01	—30.33	—11.52
Hose: rubber, linen, etc., ...	5	306.55	304.60	—1.95	—0.64
Hosiery and knit goods, ...	38	286.90	284.82	—2.08	—0.72
Ink, muclage, and paste, ...	8	302.73	302.76	+0.03	+0.01
Ivory, bone, shell, and horn goods, etc., ...	16	276.92	288.76	+11.84	+4.28
Leather, ...	128	288.05	292.15	+4.10	+1.42
Liquors and beverages (not spirituous), ...	20	301.96	302.23	+0.27	+0.09
Liquors: malt, distilled, and fermented, ...	58	298.81	303.42	+4.61	+1.54
Lumber, ...	34	270.68	269.68	—1.00	—0.37
Machines and machinery, ...	360	292.85	275.70	—17.15	—5.86
Metals and metallic goods, ...	384	279.65	277.54	—2.11	—0.75
Mixed textiles, ...	12	259.08	298.59	+39.51	+15.25
Models, lasts, and patterns, ...	44	284.00	286.91	+2.91	+1.02
Musical instruments and materials, ...	64	259.06	262.14	+3.08	+1.19
Oils and illuminating fluids, ...	8	304.46	304.13	—0.33	—0.11
Paints, colors, and crude chemicals, ...	23	263.66	260.42	—3.24	—1.28
Paper, ...	91	267.80	272.49	+4.69	+1.75
Perfumes, toilet articles, etc., ...	5	287.63	299.65	+12.12	+4.22
Photographs and photographic materials, ...	25	295.96	302.05	+6.09	+2.06
Polishes and dressing, ...	28	296.66	300.47	+3.81	+1.28
Printing, publishing, and bookbinding, ...	55	294.34	296.71	+2.37	+0.81
Print works, dye works, and bleacheries, ...	49	282.10	294.41	+12.31	+4.36
Railroad construction and equipment, ...	15	289.16	295.02	—4.14	—1.43
Rubber and elastic goods, ...	41	265.17	256.13	—9.04	—3.41
Saddlery and harness, ...	36	288.20	296.61	+8.41	+2.92
Scientific instruments and appliances, ...	20	302.80	297.89	—4.91	—1.62
Shipbuilding, ...	47	291.12	293.48	+2.36	+0.81
Silk and silk goods, ...	9	259.43	284.06	+24.63	+9.49
Sporting and athletic goods, ...	5	302.38	293.70	—8.68	—2.87
Stone, ...	202	279.93	279.08	—0.85	—0.30
Straw and palm leaf goods, ...	16	274.85	277.28	+2.43	+0.88
Tallow, candles, soap, and grease, ...	64	293.95	291.29	—2.66	—0.90
Tobacco, snuff, and cigars, ...	58	291.27	291.49	+0.22	+0.08
Toys and games (children's), ...	9	288.01	292.26	+4.25	+1.48
Trunks and valises, ...	7	249.93	251.38	+1.45	+0.58
Whips, lashes, and stocks, ...	14	283.64	294.81	+11.17	+3.94
Wooden goods, ...	107	289.50	292.70	+3.20	+1.11
Woollen goods, ...	117	264.69	282.90	+18.21	+6.88
Worsteds goods, ...	31	285.44	294.43	+8.99	+3.15
ALL INDUSTRIES, ...	4,695	281.03	283.33	+2.30	+0.82

STATISTICS OF MANUFACTURES:

INDUSTRY PRESENTATIONS.

BOOTS AND SHOES.
CARPETINGS.
CARRIAGES AND WAGONS.
CLOTHING.
COTTON GOODS.
FOOD PREPARATIONS.
FURNITURE.
HOSIERY AND KNIT GOODS.
LEATHER.
MACHINES AND MACHINERY.
METALS AND METALLIC GOODS.
MUSICAL INSTRUMENTS AND MATERIALS.
PAPER.
WOOLLEN GOODS.
WORSTED GOODS.
ALL INDUSTRIES.

1896, 1897.

NOTES.

The following explanatory notes should be read in connection with the tables to which they refer:

ESTABLISHMENTS, PARTNERS, ETC.

There are duplications in the lines devoted to "number of private firms," "partners," "number of corporations," and "stockholders." They are caused by the fact that the same firm or corporation is often engaged in manufacturing in two or more establishments located in the same town; sometimes in the same industry in different towns; and sometimes in more than one industry in the same town or in different towns. The plan adopted has been to consider each establishment as one (whether managed in connection with another or not), and to credit the whole number of firms, partners, corporations, and stockholders to each industry, but, in making up the total for "All Industries," to omit the duplications. Stockholders of certain establishments which are operated by railroad companies, or by syndicates or associations, many of which have extensive investments of capital outside this Commonwealth, are not included in this presentation; since to include all the stockholders of a railroad company, or of a syndicate or similar association, in connection with such merely branch establishments, incidental only to the main business of the corporation, would result in abnormally increasing the aggregate. The industries in which duplications appear may be ascertained by reference to the tables on pages 4 to 11.

CAPITAL INVESTED.

In this presentation, the figures given against "Amount of capital invested" represent the returns made by the same establishments for each of the years given. Comparison is made, as regards the amount of capital invested between these two years. The relative increase or decrease in the later year as compared with the earlier year is given in amounts and percentages.

STOCK USED.

In this presentation, the figures given against "Total value of stock used" represent the returns made by the same establishments for each of the years given. Comparison is made between the value of stock used in each of these two years. The relative increase or decrease in the later year as compared with the earlier year is given in amounts and percentages.

GOODS MADE.

In this presentation, the figures given against "Total value of goods made and work done" represent the returns made by the same establishments for each of the years given. Comparison is made between the value of goods made and work done in each of these two years. The relative increase or decrease in the later year as compared with the earlier year is given in amounts and percentages.

PERSONS EMPLOYED.

This presentation is divided into two sections. In the first is shown the aggregate average number of persons employed, the aggregate number of persons employed at periods of employment of the smallest number, the aggregate number of persons employed at periods of employment of the greatest number, and the excess of greatest over smallest number. By the terms "Periods of employment of smallest number" and "Periods of employment of greatest number" are meant those times, as regards aggregate number of persons employed, when the smallest or greatest number, respectively, was employed. The relative increase or decrease, expressed in amounts and percentages, is also given for one year as compared with the other. In the second section is shown the aggregate number of persons employed, by sex, during each month of the two years specified. It should be borne in mind that the persons here enumerated are wage earners only; officers, clerks, or other salaried persons are not included.

WAGES AND EARNINGS.

In this presentation is shown the total amount paid in wages to all wage earners employed for each of the two years, the average yearly earnings per individual without regard to sex or age, and the relative increases or decreases in one year as compared with the other, expressed in amounts and percentages. The average yearly earnings have been obtained by dividing the total amount paid in wages by the figures representing the average number of persons employed. In this section is also shown the classified weekly earnings received by employes, ranging from under \$5 per week to \$20 per week and over, and the number of males and females receiving same. The returns were made by manufacturers to cover the week during which the largest number of persons was employed. It should be borne in mind that these figures represent the sums paid to wage earners only and do not include amounts paid to officers, clerks, or other salaried persons.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.

In this presentation is shown the average proportion of business done and the average number of days in operation. Greatest capacity, or maximum production, has been considered 100 per cent, and the percentages given indicate the average proportion of business done by each establishment during each year on the basis stated. The average number of days in operation is based upon the average number of persons employed, the number of days worked in each establishment being multiplied by the figures representing the average number of persons, and the sum divided by the aggregate number of persons, thus obtaining an average for each industry and for "All Industries." The relative increase or decrease in the later year as compared with the earlier year is given with its equivalent percentage.

BOOTS AND SHOES. 1896, 1897.**ESTABLISHMENTS, PARTNERS, ETC.**

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DE- CREASE (-), OR NO CHANGE (=), IN 1897	
			Number	Percent- ages
Number of establishments reporting, . . .	675	675	=	-
Number of private firms, ...	612	604	-8	-1.31
Number of partners, ...	1,022	1,006	-16	-1.57
Males, ...	993	977	-16	-1.61
Females, ...	13	10	-3	-23.08
Special, ...	15	15	=	-
Estates, ...	1	4	+3	+300.00
Number of corporations, ...	63	71	+8	+12.70
Number of stockholders, ...	785	830	+45	+5.73
Males, ...	606	640	+34	+5.61
Females, ...	157	160	+3	+1.91
Banks, trustees, etc., ...	22	30	+8	+36.36
Aggregates: partners and stockholders, .	1,807	1,836	+29	+1.60

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$21,550,886	\$23,014,435	+\$1,463,549	+6.79

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$57,883,071	\$61,012,700	+\$3,629,629	+6.33

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$98,590,910	\$99,773,896	+\$1,182,986	+1.61

BOOTS AND SHOES — 1896, 1897 — Continued.

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	45,427	47,788	+2,361	+5.20
Smallest number, ...	34,607	38,311	+3,704	+10.70
Greatest number, ...	55,413	57,340	+1,927	+3.48
Excess of greatest over smallest number, .	20,806	19,029	—1,777	—8.54

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	30,722	13,806	44,528	32,124	14,846	46,970
February, ...	31,921	14,249	46,170	33,012	14,957	47,969
March, ...	32,415	14,064	46,479	33,819	15,060	48,879
April, ...	32,534	14,202	46,736	33,263	14,946	48,208
May, ...	32,492	14,410	46,902	33,108	14,905	48,013
June, ...	31,946	14,106	46,052	31,654	14,066	45,720
July, ...	30,870	13,445	44,315	31,319	13,960	45,279
August, ...	31,258	13,982	45,240	33,377	15,099	48,476
September, ...	31,327	13,849	45,176	33,759	15,626	49,385
October, ...	31,449	13,844	45,293	33,525	15,194	48,719
November, ...	30,532	13,249	43,781	32,595	14,863	47,458
December, ...	30,802	13,458	44,260	32,861	15,276	48,137

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$21,868,856	\$22,505,580	+\$636,724	+2.91
Average yearly earnings, ...	431.41	470.95	—10.46	—2.17

BOOTS AND SHOES — 1896, 1897 — Concluded.

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	2,192	3,247	5,439	2,624	3,620	6,244
\$5 but under \$6, ...	1,357	1,761	3,118	1,623	2,108	3,731
\$6 but under \$7, ...	1,977	2,051	4,028	2,215	2,290	4,505
\$7 but under \$8, ...	2,250	1,996	4,246	2,349	2,257	4,606
\$8 but under \$9, ...	2,551	1,787	4,338	2,602	1,979	4,581
\$9 but under \$10, ...	3,427	1,885	5,312	3,525	1,920	5,445
\$10 but under \$12, ...	5,568	2,336	7,904	6,128	2,092	8,220
\$12 but under \$15, ...	8,288	1,538	9,826	8,657	1,531	10,188
\$15 but under \$20, ...	7,065	617	7,682	6,508	412	6,920
\$20 and over, ...	2,613	42	2,655	2,201	59	2,260
TOTALS, ...	37,288	17,260	54,548	38,432	18,268	56,700

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Proportion and Days	Percent-ages
Average proportion of business done, . . .	60.40	59.78	-0.62	-1.03
Average number of days in operation, . . .	284.66	284.74	+0.08	+0.03

CARPETINGS. 1896, 1897.

ESTABLISHMENTS, PARTNERS, ETC.

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DECREASE (-), OR NO CHANGE (=), IN 1897	
			Number	Percent-ages
Number of establishments reporting, . . .	12	12	=	-
Number of private firms, ...	5	4	-1	-20.00
Number of partners, ...	8	6	-2	-25.00
Males, ...	8	6	-2	-25.00
Number of corporations, ...	7	8	+1	+14.29
Number of stockholders, ...	977	976	-1	-0.10
Males, ...	427	419	-8	-1.87
Females, ...	370	377	+7	+1.89
Banks, trustees, etc., ...	180	180	=	-
Aggregates: partners and stockholders, . .	985	982	-3	-0.30

CARPETINGS — 1896, 1897 — Continued.

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$6,063,982	\$6,784,921	+\$720,939	+11.89

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$3,445,442	\$3,898,404	+\$452,962	+13.15

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$5,941,456	\$6,364,709	+\$423,253	+7.12

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	4,325	4,622	+297	+6.87
Smallest number, ...	3,502	4,207	+705	+20.13
Greatest number, ...	4,861	4,943	+82	+1.69
Excess of greatest over smallest number, .	1,359	736	—623	—45.84

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	2,211	2,469	4,680	2,222	2,297	4,519
February, ...	2,228	2,366	4,594	2,249	2,438	4,687
March, ...	2,269	2,290	4,559	2,214	2,383	4,597
April, ...	2,203	2,305	4,508	2,264	2,392	4,656
May, ...	2,240	2,421	4,661	2,291	2,436	4,727
June, ...	2,233	2,431	4,664	2,273	2,405	4,678

CARPETINGS — 1896, 1897 — Concluded.

PERSONS EMPLOYED: BY MONTHS — Concluded.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
July, ...	2,282	2,306	4,588	2,271	2,377	4,648
August, ...	2,183	2,100	4,283	2,280	2,361	4,641
September, ...	1,664	1,375	3,039	2,232	2,430	4,662
October, ...	1,998	1,804	3,802	2,247	2,351	4,598
November, ...	2,148	2,042	4,190	2,257	2,251	4,508
December, ...	2,202	2,151	4,353	2,315	2,257	4,572

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$1,490,036	\$1,605,379	+\$115,343	+7.74
Average yearly earnings, ...	344.52	347.33	+2.81	+0.82

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	365	600	965	377	640	1,017
\$5 but under \$6, ...	194	524	718	152	587	739
\$6 but under \$7, ...	233	404	637	237	417	654
\$7 but under \$8, ...	197	407	604	215	337	552
\$8 but under \$9, ...	244	255	499	232	184	416
\$9 but under \$10, ...	253	166	419	262	184	446
\$10 but under \$12, ...	301	144	445	305	179	484
\$12 but under \$15, ...	277	13	290	322	25	347
\$15 but under \$20, ...	205	—	205	208	—	208
\$20 and over, ...	67	—	67	71	—	71
TOTALS, ...	2,336	2,513	4,849	2,381	2,553	4,934

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Proportion and Days	Percent- ages
Average proportion of business done, ...	68.83	67.33	—1.50	—2.18
Average number of days in operation, ...	244.64	243.77	—0.87	—0.36

CARRIAGES AND WAGONS. 1896, 1897.

ESTABLISHMENTS, PARTNERS, ETC.

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DECREASE (-), OR NO CHANGE (=), IN 1897	
			Number	Percent- ages
Number of establishments reporting, . . .	136	136	=	-
Number of private firms, ...	126	127	+1	+0.79
Number of partners, ...	188	189	+1	+0.53
Males, ...	182	183	+1	+0.55
Females, ...	1	-	-1	-100.00
Special, ...	1	1	=	-
Estates, ...	4	5	+1	+25.00
Number of corporations, ...	10	9	-1	-10.00
Number of stockholders, ...	149	70	-79	-53.02
Males, ...	86	51	-35	-40.70
Females, ...	58	14	-44	-75.86
Banks, trustees, etc., ...	5	5	=	-
Aggregates: partners and stockholders, .	337	259	-78	-23.15

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$2,350,753	\$2,210,743	-\$140,010	-5.96

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$1,558,205	\$1,458,623	-\$99,582	-6.39

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$3,692,337	\$3,465,183	-\$227,154	-6.15

CARRIAGES AND WAGONS—1896, 1897—Continued.

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	1,982	1,884	—98	—4.94
Smallest number, ...	1,487	1,435	—52	—3.50
Greatest number, ...	2,499	2,897	—102	—4.08
Excess of greatest over smallest number, .	1,012	962	—50	—4.94

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	2,036	22	2,058	1,838	15	1,853
February, ...	2,109	24	2,133	1,982	16	1,998
March, ...	2,200	22	2,222	2,067	16	2,083
April, ...	2,299	20	2,319	2,212	13	2,225
May, ...	2,331	21	2,352	2,232	14	2,246
June, ...	2,217	18	2,235	2,148	13	2,161
July, ...	1,837	14	1,851	1,787	12	1,799
August, ...	1,716	15	1,731	1,647	12	1,659
September, ...	1,628	13	1,641	1,611	14	1,625
October, ...	1,640	14	1,654	1,627	13	1,640
November, ...	1,686	15	1,701	1,625	13	1,638
December, ...	1,757	18	1,775	1,680	14	1,694

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$1,160,075	\$1,088,431	—\$71,644	—6.18
Average yearly earnings, ...	585.81	577.72	—7.59	—1.30

CARRIAGES AND WAGONS — 1896, 1897 — Concluded.

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	31	3	34	30	1	31
\$5 but under \$6, ...	29	5	34	23	2	25
\$6 but under \$7, ...	51	4	55	60	5	65
\$7 but under \$8, ...	83	7	90	94	6	100
\$8 but under \$9, ...	87	3	90	105	2	107
\$9 but under \$10, ...	270	4	274	249	3	252
\$10 but under \$12, ...	441	—	441	445	1	446
\$12 but under \$15, ...	775	2	777	683	—	683
\$15 but under \$20, ...	593	—	593	581	—	581
\$20 and over, ...	66	—	66	54	—	54
TOTALS, ...	2,426	28	2,454	2,324	20	2,344

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Proportion and Days	Percentages
Average proportion of business done, . . .	58.40	55.82	—2.67	—4.56
Average number of days in operation, . . .	281.36	284.60	+3.24	+1.16

CLOTHING. 1896, 1897.

ESTABLISHMENTS, PARTNERS, ETC.

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DECREASE (—), OR NO CHANGE (=), IN 1897	
			Number	Percentages
Number of establishments reporting, . . .	155	155	=	—
Number of private firms, ...	132	131	—1	—0.76
Number of partners, ...	235	231	—4	—1.70
Males, ...	224	222	—2	—0.89
Females, ...	7	6	—1	—14.29
Special, ...	2	2	=	—
Estates, ...	2	1	—1	—50.00
Number of corporations, ...	23	24	+1	+4.35
Number of stockholders, ...	427	429	+2	+0.47
Males, ...	305	288	—17	—5.57
Females, ...	111	118	+7	+6.31
Banks, trustees, etc., ...	11	23	+12	+109.09
Aggregates: partners and stockholders, . .	662	660	—2	—0.30

CLOTHING — 1896, 1897 — Continued.

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$5,091,309	\$5,687,416	+ \$596,107	+11.71

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$10,459,712	\$10,763,106	+ \$303,394	+2.90

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$18,717,946	\$19,588,255	+ \$870,309	+4.65

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	8,075	8,673	+598	+7.41
Smallest number, ...	6,183	6,570	+387	+6.26
Greatest number, ...	9,715	10,465	+750	+7.72
Excess of greatest over smallest number, .	3,532	3,895	+363	+10.28

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	2,561	5,606	8,167	2,449	5,665	8,114
February, ...	2,595	5,882	8,477	2,486	5,995	8,481
March, ...	2,568	5,960	8,527	2,562	6,331	8,893
April, ...	2,578	5,948	8,526	2,586	6,435	9,021
May, ...	2,552	5,849	8,401	2,597	6,334	8,931
June, ...	2,462	5,424	7,886	2,629	5,912	8,541

CLOTHING — 1896, 1897 — Concluded.

PERSONS EMPLOYED: BY MONTHS — Concluded.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
July, ...	2,424	4,551	6,975	2,661	5,324	7,985
August, ...	2,442	4,953	7,395	2,689	5,376	8,065
September, ...	2,524	5,477	8,001	2,779	6,076	8,855
October, ...	2,534	5,786	8,320	2,831	6,390	9,221
November, ...	2,499	5,697	8,096	2,803	6,315	9,118
December, ...	2,433	5,622	8,055	2,708	6,077	8,785

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$3,051,848	\$3,300,285	+ \$248,437	+ 8.14
Average yearly earnings, ...	377.94	380.52	+ 2.58	+ 0.68

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	159	1,320	1,479	273	1,664	1,937
\$5 but under \$6, ...	118	1,064	1,172	158	1,147	1,305
\$6 but under \$7, ...	187	1,239	1,426	207	1,252	1,459
\$7 but under \$8, ...	175	1,057	1,232	204	1,099	1,303
\$8 but under \$9, ...	223	927	1,150	210	897	1,107
\$9 but under \$10, ...	300	541	841	268	650	918
\$10 but under \$12, ...	392	404	796	312	538	850
\$12 but under \$15, ...	487	176	663	538	159	697
\$15 but under \$20, ...	487	49	536	513	40	553
\$20 and over, ...	392	80	472	381	12	393
TOTALS, ...	2,920	6,847	9,767	3,064	7,458	10,522

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Proportion and Days	Percent- ages
Average proportion of business done, ...	61.65	64.21	+ 2.56	+ 4.15
Average number of days in operation, ...	282.82	289.98	+ 7.16	+ 2.53

COTTON GOODS. 1896, 1897.

ESTABLISHMENTS, PARTNERS, ETC.

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DE- CREASE (-), OR NO CHANGE (=), IN 1897	
			Number	Percent- ages
Number of establishments reporting, . . .	163	163	=	-
Number of private firms, ...	35	35	=	-
Number of partners, ...	62	62	=	-
Males, ...	53	52	-1	-1.89
Females, ...	7	7	=	-
Estates, ...	2	3	+1	+50.00
Number of corporations, ...	123	123	=	-
Number of stockholders, ...	21,576	21,689	+113	+0.52
Males, ...	10,709	10,216	-493	-4.60
Females, ...	8,190	8,455	+265	+3.24
Banks, trustees, etc., ...	2,677	3,018	+341	+12.74
Aggregates: partners and stockholders, .	21,638	21,751	+113	+0.52

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$112,561,310	\$110,655,603	-\$1,905,707	-1.69

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$49,172,309	\$48,987,402	-\$184,907	-0.38

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$85,561,417	\$85,414,028	-\$147,389	-0.17

COTTON GOODS—1896, 1897—Continued.

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	77,669	79,144	+1,475	+1.90
Smallest number, ...	65,779	69,330	+3,551	+5.40
Greatest number, ...	84,628	85,103	+475	+0.56
Excess of greatest over smallest number, .	18,849	15,773	—3,076	—16.32

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	38,614	39,591	78,205	41,213	40,507	81,720
February, ...	39,797	39,674	79,471	39,904	39,107	79,011
March, ...	39,825	39,822	79,647	40,340	39,567	79,907
April, ...	39,741	39,606	79,347	40,235	39,593	79,828
May, ...	39,708	39,875	79,583	40,173	40,075	80,248
June, ...	39,806	39,673	79,479	39,507	39,399	78,906
July, ...	38,159	37,094	75,253	38,671	37,601	76,272
August, ...	34,231	33,159	67,390	36,672	34,998	71,670
September, ...	36,402	35,695	72,097	40,087	39,807	79,844
October, ...	39,601	39,266	78,867	40,522	40,343	80,865
November, ...	40,301	39,844	80,145	40,713	40,421	81,134
December, ...	40,876	40,604	81,480	40,153	40,099	80,252

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$25,608,529	\$26,460,493	+\$856,964	+3.35
Average yearly earnings, ...	329.65	334.33	+4.68	+1.42

COTTON GOODS—1896, 1897—Concluded.

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	7,704	11,976	19,680	8,011	12,048	20,059
\$5 but under \$6, ...	4,998	8,580	13,578	5,151	8,717	13,868
\$6 but under \$7, ...	7,118	8,125	15,243	7,075	8,493	15,568
\$7 but under \$8, ...	5,377	6,680	12,057	5,324	6,425	11,749
\$8 but under \$9, ...	5,063	4,642	9,705	5,093	4,572	9,665
\$9 but under \$10, ...	3,496	1,487	4,983	3,647	1,448	5,095
\$10 but under \$12, ...	4,267	593	4,860	4,206	512	4,718
\$12 but under \$15, ...	2,335	52	2,387	2,527	45	2,572
\$15 but under \$20, ...	1,048	3	1,051	991	8	999
\$20 and over, ...	632	—	632	605	—	605
TOTALS, ...	42,038	42,138	84,176	42,630	42,268	84,898

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Proportion and Days	Percentages
Average proportion of business done, . . .	79.52	81.90	+2.38	+2.99
Average number of days in operation, . . .	279.92	285.15	+5.23	+1.87

FOOD PREPARATIONS. 1896, 1897.

ESTABLISHMENTS, PARTNERS, ETC.

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DECREASE (—), OR NO CHANGE (=), IN 1897	
			Number	Percentages
Number of establishments reporting, . . .	336	336	=	—
Number of private firms, ...	293	290	—3	—1.02
Number of partners, ...	416	406	—10	—2.40
Males, ...	408	393	—10	—2.48
Females, ...	5	6	+1	+20.00
Special, ...	1	1	=	—
Estates, ...	7	6	—1	—14.29
Number of corporations, ...	43	46	+3	+6.98
Number of stockholders, ...	627	654	+27	+4.31
Males, ...	504	531	+27	+5.36
Females, ...	96	102	+6	+6.25
Banks, trustees, etc., ...	27	21	—6	—22.22
Aggregates: partners and stockholders, .	1,043	1,060	+17	+1.63

FOOD PREPARATIONS—1896, 1897—Continued.

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$16,298,703	\$16,278,958	—\$19,750	—0.12

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$38,971,952	\$40,580,984	+\$1,609,032	+4.18

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$49,833,763	\$50,799,905	+\$966,142	+1.94

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	7,840	8,252	+412	+5.26
Smallest number, ...	6,773	7,069	+296	+4.37
Greatest number, ...	9,300	9,935	+635	+6.83
Excess of greatest over smallest number, .	2,527	2,866	+339	+13.42

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	5,690	1,923	7,613	5,897	2,107	8,004
February, ...	5,770	1,975	7,745	6,148	2,160	8,308
March, ...	5,672	2,021	7,593	5,852	2,165	8,017
April, ...	5,472	2,025	7,497	5,719	2,129	7,848
May, ...	5,555	1,993	7,548	5,731	2,188	7,919
June, ...	5,678	2,003	7,681	5,837	2,279	8,116

FOOD PREPARATIONS—1896, 1897—Concluded.

PERSONS EMPLOYED: BY MONTHS—Concluded.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
July, ...	5,687	2,011	7,698	5,826	2,168	7,994
August, ...	5,588	1,925	7,513	5,839	2,132	7,971
September, ...	5,746	2,133	7,879	6,024	2,464	8,488
October, ...	5,922	2,357	8,279	6,166	2,580	8,746
November, ...	6,048	2,332	8,380	6,188	2,605	8,793
December, ...	6,063	2,342	8,405	6,253	2,592	8,845

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$3,567,644	\$3,681,583	+\$113,939	+3.19
Average yearly earnings, ...	455.06	446.14	—8.92	—1.96

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	319	1,478	1,797	317	1,628	1,945
\$5 but under \$6, ...	239	497	736	299	538	837
\$6 but under \$7, ...	323	454	777	328	474	802
\$7 but under \$8, ...	524	128	652	501	150	651
\$8 but under \$9, ...	829	92	921	768	92	860
\$9 but under \$10, ...	978	42	1,020	1,211	38	1,249
\$10 but under \$12, ...	1,040	34	1,074	1,177	32	1,209
\$12 but under \$15, ...	1,423	15	1,438	1,408	12	1,420
\$15 but under \$20, ...	687	4	691	712	5	717
\$20 and over, ...	179	—	179	185	—	185
TOTALS, ...	6,541	2,744	9,285	6,906	2,969	9,875

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Proportion and Days	Percent- ages
Average proportion of business done, ...	61.33	60.41	—0.92	—1.50
Average number of days in operation, ...	299.61	299.18	—0.43	—0.14

FURNITURE. 1896, 1897.**ESTABLISHMENTS, PARTNERS, ETC.**

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DE- CREASE (-), OR NO CHANGE (=), IN 1897	
			Number	Percent- ages
Number of establishments reporting, . . .	132	132	=	-
Number of private firms, ...	115	114	-1	-0.87
Number of partners, ...	195	186	-9	-4.62
Males, ...	182	176	-6	-3.30
Females, ...	10	8	-2	-20.00
Special, ...	2	1	-1	-50.00
Estates, ...	1	1	=	-
Number of corporations, ...	17	18	+1	+5.88
Number of stockholders, ...	344	1,083	+739	+214.83
Males, ...	234	829	+595	+254.27
Females, ...	80	204	+124	+155.00
Banks, trustees, etc., ...	30	50	+20	+66.67
Aggregates: partners and stockholders, .	539	1,269	+730	+135.44

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$4,592,562	\$7,197,254	+\$2,604,692	+56.72

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$5,669,152	\$5,707,590	+\$38,438	+0.68

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$10,591,083	\$10,666,132	+\$75,099	+0.71

FURNITURE — 1896, 1897 — Continued.

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	4,954	5,023	+69	+1.39
Smallest number, ...	4,066	4,152	+86	+2.12
Greatest number, ...	5,813	5,947	+134	+2.31
Excess of greatest over smallest number, .	1,747	1,795	+48	+2.75

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	4,429	475	4,904	4,293	480	4,773
February, ...	4,437	529	4,966	4,406	541	4,947
March, ...	4,568	536	5,104	4,543	570	5,113
April, ...	4,575	544	5,119	4,556	582	5,138
May, ...	4,573	576	5,149	4,497	612	5,109
June, ...	4,434	587	5,021	4,441	612	5,053
July, ...	4,097	461	4,558	4,188	492	4,680
August, ...	4,176	511	4,687	4,216	533	4,754
September, ...	4,263	522	4,785	4,460	535	4,995
October, ...	4,440	573	5,013	4,646	598	5,244
November, ...	4,487	576	5,063	4,705	585	5,290
December, ...	4,521	525	5,046	4,558	548	5,106

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$2,370,373	\$2,358,797	—\$11,576	—0.49
Average yearly earnings, ...	478.48	469.60	—8.88	—1.86

FURNITURE — 1896, 1897 — Concluded.

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	316	97	413	202	90	292
\$5 but under \$6, ...	226	59	285	147	60	207
\$6 but under \$7, ...	209	144	353	237	185	422
\$7 but under \$8, ...	390	202	592	496	199	695
\$8 but under \$9, ...	383	68	451	381	70	451
\$9 but under \$10, ...	493	40	533	498	46	544
\$10 but under \$12, ...	875	18	893	848	23	871
\$12 but under \$15, ...	1,537	4	1,541	1,671	6	1,677
\$15 but under \$20, ...	624	1	625	674	-	674
\$20 and over, ...	116	-	116	110	-	110
TOTALS, ...	5,169	633	5,802	5,264	679	5,943

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Proportion and Days	Percentages
Average proportion of business done, ...	55.99	56.56	+0.57	+1.02
Average number of days in operation, ...	294.37	293.55	-0.82	-0.28

HOSIERY AND KNIT GOODS. 1896, 1897.

ESTABLISHMENTS, PARTNERS, ETC.

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DECREASE (-), OR NO CHANGE (=), IN 1897	
			Number	Percentages
Number of establishments reporting, ...	38	38	=	-
Number of private firms, ...	22	22	=	-
Number of partners, ...	42	37	-5	-11.90
Males, ...	39	35	-4	-10.26
Females, ...	3	2	-1	-33.33
Number of corporations, ...	16	16	=	-
Number of stockholders, ...	1,305	1,312	+7	+0.54
Males, ...	649	660	+11	+1.69
Females, ...	405	405	=	-
Banks, trustees, etc., ...	251	247	-4	-1.59
Aggregates: partners and stockholders, ...	1,347	1,349	+2	+0.15

HOSIERY AND KNIT GOODS—1896, 1897—Continued.

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$4,053,589	\$4,136,120	+\$82,531	+2.04

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$2,304,645	\$2,190,800	—\$113,845	—4.94

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$4,799,611	\$4,500,470	—\$299,141	—6.23

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	5,470	5,249	—221	—4.04
Smallest number, ...	4,347	4,677	+330	+7.59
Greatest number, ...	6,247	6,280	+33	+0.53
Excess of greatest over smallest number, .	1,900	1,603	—297	—15.63

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	1,817	3,923	5,740	1,737	3,688	5,425
February, ...	1,804	3,881	5,685	1,706	3,652	5,358
March, ...	1,797	3,915	5,712	1,761	3,713	5,474
April, ...	1,694	3,864	5,558	1,788	3,754	5,542
May, ...	1,714	3,867	5,581	1,772	3,695	5,467
June, ...	1,674	3,751	5,425	1,716	3,597	5,313

HOSIERY AND KNIT GOODS—1896, 1897—Concluded.

PERSONS EMPLOYED: BY MONTHS—Concluded.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
July, ...	1,535	3,618	5,203	1,659	3,473	5,132
August, ...	1,509	3,341	4,850	827	1,871	2,698
September, ...	1,644	3,259	4,903	1,676	3,623	5,299
October, ...	1,725	3,772	5,497	1,837	3,879	5,716
November, ...	1,779	3,871	5,650	1,839	3,988	5,827
December, ...	1,745	3,819	5,564	1,812	3,848	5,660

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$1,855,417	\$1,586,389	—\$269,028	—4.17
Average yearly earnings, ...	302.64	302.23	—0.41	—0.14

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	385	1,837	2,222	372	1,886	2,258
\$5 but under \$6, ...	157	847	1,004	165	883	1,048
\$6 but under \$7, ...	345	688	1,033	354	710	1,064
\$7 but under \$8, ...	209	497	706	209	433	642
\$8 but under \$9, ...	159	253	412	158	220	378
\$9 but under \$10, ...	150	101	251	164	84	248
\$10 but under \$12, ...	218	50	268	195	43	238
\$12 but under \$15, ...	149	18	167	144	8	152
\$15 but under \$20, ...	94	1	95	78	2	80
\$20 and over, ...	38	—	38	38	—	38
TOTALS, ...	1,904	4,292	6,196	1,877	4,269	6,146

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Proportion and Days	Percent- ages
Average proportion of business done, ...	55.79	57.11	+1.32	+2.37
Average number of days in operation, ...	286.90	284.82	—2.08	—0.72

LEATHER. 1896, 1897.**ESTABLISHMENTS, PARTNERS, ETC.**

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DE- CREASE (-), OR NO CHANGE (=), IN 1897	
			Number	Percent- ages
Number of establishments reporting, . . .	126	126	=	-
Number of private firms, ...	109	106	-3	-2.75
Number of partners, ...	198	181	-17	-8.59
Males, ...	192	174	-18	-9.38
Females, ...	1	1	=	-
Special, ...	4	6	+2	+50.00
Estates, ...	1	-	-1	-100.00
Number of corporations, ...	17	20	+3	+17.65
Number of stockholders, ...	259	274	+15	+5.79
Males, ...	178	199	+21	+11.80
Females, ...	66	64	-2	-3.03
Banks, trustees, etc., ...	15	11	-4	-26.67
Aggregates: partners and stockholders, .	457	455	-2	-0.44

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$6,995,486	\$7,559,363	+\$563,877	+8.06

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$13,166,483	\$16,195,365	+\$3,028,882	+23.00

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$18,740,542	\$21,837,377	+\$3,096,835	+16.52

LEATHER — 1896, 1897 — Continued.

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	6,013	6,413	+400	+6.65
Smallest number, ...	4,749	5,214	+465	+9.79
Greatest number, ...	7,535	7,634	+99	+1.31
Excess of greatest over smallest number, .	2,786	2,420	—366	—13.14

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	6,206	116	6,321	6,092	121	6,213
February, ...	6,172	119	6,291	6,208	122	6,330
March, ...	6,030	114	6,144	6,211	114	6,325
April, ...	5,984	118	6,102	6,192	111	6,303
May, ...	5,969	123	6,092	6,247	114	6,361
June, ...	5,946	111	6,057	6,160	95	6,255
July, ...	5,835	108	5,943	6,139	82	6,221
August, ...	5,834	105	5,939	6,342	101	6,443
September, ...	5,585	110	5,695	6,418	105	6,523
October, ...	5,447	103	5,550	6,559	114	6,673
November, ...	5,784	113	5,897	6,592	121	6,713
December, ...	5,949	124	6,073	6,434	121	6,555

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$2,851,793	\$3,054,684	+\$202,891	+7.11
Average yearly earnings, ...	474.27	476.33	+2.06	+0.43

LEATHER—1896, 1897—Concluded.

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	170	55	225	220	53	273
\$5 but under \$6, ...	205	27	232	195	17	212
\$6 but under \$7, ...	374	38	412	442	36	478
\$7 but under \$8, ...	602	11	613	687	15	702
\$8 but under \$9, ...	783	8	791	829	9	838
\$9 but under \$10, ...	1,763	2	1,765	1,760	8	1,768
\$10 but under \$12, ...	1,873	9	1,882	1,677	4	1,681
\$12 but under \$15, ...	1,016	2	1,018	1,068	2	1,070
\$15 but under \$20, ...	444	-	444	474	-	474
\$20 and over, ...	120	-	120	105	-	105
TOTALS, ...	7,350	152	7,502	7,457	144	7,601

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Proportion and Days	Percentages
Average proportion of business done, . . .	61.06	60.98	-0.13	-0.21
Average number of days in operation, . . .	288.05	292.15	+4.10	+1.42

MACHINES AND MACHINERY. 1896, 1897.

ESTABLISHMENTS, PARTNERS, ETC.

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DECREASE (-), OR NO CHANGE (=), IN 1897	
			Number	Percentages
Number of establishments reporting, . . .	360	360	=	-
Number of private firms, ...	237	239	+2	+0.84
Number of partners, ...	361	364	+3	+0.83
Males, ...	339	342	+3	+0.88
Females, ...	11	13	+2	+18.18
Estates, ...	11	9	-2	-18.18
Number of corporations, ...	123	121	-2	-1.63
Number of stockholders, ...	2,498	2,526	+28	+1.12
Males, ...	1,643	1,664	+21	+1.28
Females, ...	594	628	+34	+5.72
Banks, trustees, etc., ...	261	234	-27	-10.34
Aggregates: partners and stockholders, . .	2,859	2,890	+31	+1.08

MACHINES AND MACHINERY — 1896, 1897 — Continued.

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$26,058,192	\$27,574,500	+\$1,516,308	+5.82

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$10,377,522	\$8,978,151	—\$1,399,371	—13.48

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$28,455,766	\$25,169,094	—\$3,296,672	—11.59

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897 .	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	18,503	17,387	—1,116	—6.03
Smallest number, ...	14,907	14,426	—481	—3.23
Greatest number, ...	21,740	20,687	—1,053	—4.84
Excess of greatest over smallest number, .	6,833	6,261	—572	—8.37

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	19,073	368	19,441	17,019	305	17,324
February, ...	19,151	344	19,495	16,705	318	17,023
March, ...	19,165	355	19,520	16,714	325	17,039
April, ...	18,152	344	18,496	17,893	322	18,215
May, ...	18,029	272	18,301	17,780	317	18,097
June, ...	17,943	286	18,229	17,270	294	17,564

MACHINES AND MACHINERY — 1896, 1897 — Concluded.

PERSONS EMPLOYED: BY MONTHS — Concluded.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
July, ...	17,930	273	18,203	16,541	278	16,819
August, ...	17,864	270	18,134	16,714	284	16,998
September, ...	17,554	276	17,830	16,775	309	17,084
October, ...	17,731	307	18,038	17,007	315	17,322
November, ...	17,662	312	17,974	17,256	335	17,591
December, ...	17,637	325	17,962	17,037	328	17,365

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$9,941,133	\$9,116,199	—\$824,934	—8.30
Average yearly earnings, ...	537.27	524.81	—12.96	—2.41

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	1,136	75	1,211	1,195	72	1,267
\$5 but under \$6, ...	788	83	871	862	82	944
\$6 but under \$7, ...	1,208	100	1,308	1,155	96	1,251
\$7 but under \$8, ...	1,905	43	1,948	1,743	48	1,791
\$8 but under \$9, ...	1,941	40	1,981	1,822	23	1,845
\$9 but under \$10, ...	2,523	23	2,546	2,273	23	2,296
\$10 but under \$12, ...	3,077	12	3,089	3,173	8	3,181
\$12 but under \$15, ...	4,511	4	4,515	4,303	1	4,304
\$15 but under \$20, ...	3,108	3	3,111	3,043	2	3,045
\$20 and over, ...	731	—	731	683	—	683
TOTALS, ...	20,928	383	21,311	20,252	355	20,607

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Proportion and Days	Percent- ages
Average proportion of business done, ...	57.54	54.26	—3.28	—5.70
Average number of days in operation, ...	292.85	275.70	—17.15	—5.86

METALS AND METALLIC GOODS. 1896, 1897.**ESTABLISHMENTS, PARTNERS, ETC.**

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DE- CREASE (-), OR NO CHANGE (=), IN 1897	
			Number	Percent- ages
Number of establishments reporting, . . .	384	384	=	-
Number of private firms, ...	269	270	+1	+0.37
Number of partners, ...	400	399	-1	-0.25
Males, ...	380	379	-1	-0.26
Females, ...	11	11	=	-
Special, ...	2	3	+1	+50.00
Estates, ...	7	6	-1	-14.29
Number of corporations, ...	115	114	-1	-0.87
Number of stockholders, ...	2,011	2,160	+149	+7.41
Males, ...	1,304	1,404	+100	+7.67
Females, ...	659	572	+13	+2.33
Banks, trustees, etc., ...	148	184	+36	+24.32
Aggregates: partners and stockholders, .	2,411	2,559	+148	+6.14

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$17,570,592	\$18,808,787	+\$1,238,145	+4.20

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$10,321,796	\$9,953,944	-\$367,842	-3.56

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$22,774,663	\$22,172,268	-\$602,395	-2.65

METALS AND METALLIC GOODS—1896, 1897—Continued.

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	13,709	13,608	—101	—0.74
Smallest number, ...	11,211	11,107	—104	—0.93
Greatest number, ...	15,976	16,023	+47	+0.29
Excess of greatest over smallest number, .	4,765	4,916	+151	+3.17

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	12,709	1,494	14,203	11,988	1,363	13,351
February, ...	12,707	1,478	14,185	12,251	1,460	13,711
March, ...	12,544	1,487	14,031	12,465	1,198	13,663
April, ...	12,494	1,462	13,956	12,440	1,447	13,887
May, ...	12,581	1,457	14,038	12,250	1,419	13,669
June, ...	12,268	1,382	13,650	12,012	1,332	13,344
July, ...	11,709	1,361	13,070	11,461	1,305	12,766
August, ...	11,748	1,243	12,991	11,741	1,241	12,982
September, ...	11,903	1,284	13,187	12,096	1,362	13,458
October, ...	12,189	1,341	13,530	12,413	1,525	13,938
November, ...	12,299	1,385	13,684	12,626	1,527	14,153
December, ...	12,148	1,382	13,530	12,679	1,486	14,165

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$6,920,670	\$6,707,323	—\$213,347	—3.06
Average yearly earnings, ...	504.83	492.90	—11.93	—2.36

METALS AND METALLIC GOODS—1896, 1897—Concluded.

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	868	494	1,362	874	508	1,377
\$5 but under \$6, ...	638	464	1,102	604	384	988
\$6 but under \$7, ...	964	337	1,301	972	431	1,403
\$7 but under \$8, ...	1,083	147	1,230	981	157	1,138
\$8 but under \$9, ...	967	67	1,034	1,033	45	1,078
\$9 but under \$10, ...	1,961	46	2,007	1,831	59	1,890
\$10 but under \$12, ...	2,071	42	2,113	2,065	49	2,114
\$12 but under \$15, ...	2,740	6	2,746	2,662	5	2,667
\$15 but under \$20, ...	2,347	2	2,349	2,389	6	2,395
\$20 and over, ...	655	-	655	714	3	717
TOTALS, ...	14,294	1,605	15,899	14,125	1,642	15,767

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Proportion and Days	Percentages
Average proportion of business done, . . .	59.26	57.54	-1.72	-2.90
Average number of days in operation, . . .	279.65	277.54	-2.11	-0.75

MUSICAL INSTRUMENTS AND MATERIALS.
1896, 1897.

ESTABLISHMENTS, PARTNERS, ETC.

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DECREASE (-), OR NO CHANGE (=), IN 1897	
			Number	Percentages
Number of establishments reporting, . . .	64	64	=	-
Number of private firms, ...	41	41	=	-
Number of partners, ...	61	66	+5	+8.20
Males, ...	57	61	+4	+7.02
Females, ...	2	2	=	-
Estates, ...	2	3	+1	+50.00
Number of corporations, ...	23	23	=	-
Number of stockholders, ...	301	305	+4	+1.33
Males, ...	210	220	+10	+4.76
Females, ...	65	66	+1	+1.54
Banks, trustees, etc., ...	26	19	-7	-26.92
Aggregates: partners and stockholders, .	362	371	+9	+2.49

MUSICAL INSTRUMENTS AND MATERIALS—1896, 1897

—Continued.

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percentage
Amount of capital invested, ...	\$3,939,349	\$3,816,719	—\$122,630	—3.11

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percentage
Total value of stock used, ...	\$1,492,622	\$1,708,988	+\$216,366	+14.50

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percentage
Total value of goods made and work done, . .	\$4,577,814	\$4,788,757	+\$210,943	+4.61

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percentages
Average number, ...	2,286	2,540	+254	+11.11
Smallest number, ...	1,707	1,860	+153	+8.96
Greatest number, ...	2,760	2,990	+230	+8.33
Excess of greatest over smallest number, . .	1,053	1,130	+77	+7.31

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	2,529	99	2,628	2,524	93	2,617
February, ...	2,460	99	2,559	2,507	100	2,607
March, ...	2,483	97	2,580	2,585	105	2,690
April, ...	2,459	99	2,558	2,497	104	2,601
May, ...	2,367	98	2,465	2,429	105	2,534
June, ...	1,900	57	1,957	2,356	102	2,458

MUSICAL INSTRUMENTS AND MATERIALS—1896, 1897
—Concluded.

PERSONS EMPLOYED: BY MONTHS—Concluded.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
July, ...	1,782	50	1,832	2,282	99	2,381
August, ...	1,727	49	1,776	2,013	93	2,106
September, ...	1,796	53	1,849	2,314	107	2,421
October, ...	2,162	87	2,249	2,476	119	2,595
November, ...	2,334	91	2,425	2,572	124	2,696
December, ...	2,413	93	2,506	2,615	124	2,739

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$1,361,623	\$1,447,378	+\$85,755	+6.30
Average yearly earnings, ...	595.64	569.83	—25.81	—4.33

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	84	40	124	174	34	208
\$5 but under \$6, ...	77	46	123	89	47	136
\$6 but under \$7, ...	110	11	121	127	40	167
\$7 but under \$8, ...	106	3	109	121	6	127
\$8 but under \$9, ...	107	6	113	119	4	123
\$9 but under \$10, ...	137	2	139	187	2	189
\$10 but under \$12, ...	288	4	292	368	—	368
\$12 but under \$15, ...	751	—	751	668	2	670
\$15 but under \$20, ...	760	—	760	763	—	763
\$20 and over, ...	207	—	207	194	—	194
TOTALS, ...	2,627	112	2,739	2,810	135	2,945

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Proportion and Days	Percent- ages
Average proportion of business done, . . .	53.89	53.94	+0.05	+0.09
Average number of days in operation, . . .	259.06	262.14	+3.08	+1.19

PAPER. 1896, 1897.**ESTABLISHMENTS, PARTNERS, ETC.**

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DE- CREASE (-), OR NO CHANGE (=), IN 1897	
			Number	Percent- ages
Number of establishments reporting, . . .	91	91	=	-
Number of private firms, ...	25	25	=	-
Number of partners, ...	55	55	=	-
Males, ...	54	54	=	-
Estates, ...	1	1	=	-
Number of corporations, ...	66	66	=	-
Number of stockholders, ...	1,526	1,467	-59	-3.87
Males, ...	947	888	-59	-6.23
Females, ...	459	475	+16	+3.49
Banks, trustees, etc., ...	120	104	-16	-13.33
Aggregates: partners and stockholders, .	1,581	1,522	-59	-3.73

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$20,977,979	\$20,989,176	+\$11,197	+0.05

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$11,825,894	\$11,387,275	-\$438,619	-3.71

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$19,865,086	\$19,933,033	+\$67,947	+0.34

PAPER — 1896, 1897 — Continued.

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	8,917	9,177	+260	+2.92
Smallest number, ...	7,629	8,260	+631	+8.27
Greatest number, ...	9,727	9,847	+120	+1.23
Excess of greatest over smallest number, .	2,098	1,587	—511	—24.36

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	5,610	3,658	9,268	5,537	3,665	9,202
February, ...	5,577	3,648	9,225	5,567	3,718	9,285
March, ...	5,568	3,622	9,190	5,566	3,726	9,292
April, ...	5,591	3,639	9,230	5,522	3,744	9,266
May, ...	5,527	3,593	9,120	5,460	3,683	9,143
June, ...	5,473	3,584	9,057	5,433	3,638	9,071
July, ...	5,285	3,216	8,501	5,346	3,369	8,715
August, ...	5,244	3,050	8,294	5,419	3,509	8,928
September, ...	5,122	3,265	8,387	5,539	3,645	9,184
October, ...	5,280	3,403	8,683	5,626	3,721	9,347
November, ...	5,349	3,552	8,901	5,660	3,677	9,337
December, ...	5,466	3,590	9,056	5,617	3,685	9,302

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$3,680,395	\$3,800,744	+\$120,349	+3.27
Average yearly earnings, ...	412.74	414.16	+1.42	+0.34

PAPER — 1896, 1897 — Concluded.

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	127	998	1,125	162	978	1,140
\$5 but under \$6, ...	129	1,086	1,165	107	995	1,102
\$6 but under \$7, ...	290	1,261	1,551	271	1,146	1,417
\$7 but under \$8, ...	590	342	932	612	485	1,097
\$8 but under \$9, ...	674	141	815	644	174	818
\$9 but under \$10, ...	1,387	61	1,448	1,385	98	1,473
\$10 but under \$12, ...	831	24	855	893	18	911
\$12 but under \$15, ...	898	10	908	948	18	966
\$15 but under \$20, ...	665	7	672	682	9	691
\$20 and over, ...	178	—	178	174	1	175
TOTALS, ...	5,769	3,880	9,649	5,878	3,912	9,790

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Proportion and Days	Percent-ages
Average proportion of business done, ...	73.81	75.32	+1.51	+2.05
Average number of days in operation, ...	287.80	272.49	+4.69	+1.75

WOOLLEN GOODS. 1896, 1897.

ESTABLISHMENTS, PARTNERS, ETC.

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DECREASE (—), OR NO CHANGE (=), IN 1897	
			Number	Percent-ages
Number of establishments reporting, ...	117	117	=	—
Number of private firms, ...	78	73	—5	—6.41
Number of partners, ...	135	123	—12	—8.89
Males, ...	126	116	—10	—7.94
Females, ...	6	6	=	—
Estates, ...	3	1	—2	—66.67
Number of corporations, ...	39	44	+5	+12.82
Number of stockholders, ...	1,734	1,798	+64	+3.69
Males, ...	772	786	+14	+1.81
Females, ...	651	660	+9	+1.38
Banks, trustees, etc., ...	311	352	+41	+13.18
Aggregates: partners and stockholders, ...	1,869	1,921	+52	+2.78

WOOLLEN GOODS — 1896, 1897 — Continued.

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$21,655,660	\$25,390,647	+\$3,734,987	+17.25

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$12,183,271	\$15,036,303	+\$2,853,032	+23.42

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$20,885,906	\$25,599,328	+\$4,713,422	+22.57

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	15,088	16,866	+1,778	+11.78
Smallest number, ...	12,055	14,565	+2,510	+20.82
Greatest number, ...	18,151	18,977	+826	+4.55
Excess of greatest over smallest number, .	6,096	4,412	—1,684	—27.62

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	9,920	5,831	15,751	9,939	5,785	15,724
February, ...	10,294	6,011	16,305	10,022	5,894	15,916
March, ...	10,515	6,205	16,720	10,278	6,071	16,349
April, ...	10,169	6,063	16,232	10,461	6,209	16,670
May, ...	9,841	5,922	15,763	10,683	6,232	16,915
June, ...	9,236	5,571	14,807	10,384	6,180	16,514

WOOLLEN GOODS — 1896, 1897 — Concluded.

PERSONS EMPLOYED: BY MONTHS — Concluded.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
July, ...	8,686	5,138	13,824	10,363	6,185	16,548
August, ...	8,137	4,782	12,919	10,673	6,290	16,963
September, ...	8,559	4,911	13,470	11,017	6,446	17,463
October, ...	9,746	5,445	15,191	11,331	6,634	17,965
November, ...	9,691	5,487	15,128	11,253	6,526	17,779
December, ...	9,568	5,472	15,040	11,121	6,373	17,494

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$5,494,181	\$6,285,365	+\$791,184	+14.46
Average yearly earnings, ...	364.14	372.66	+8.52	+2.34

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	1,051	1,670	2,721	1,166	1,699	2,865
\$5 but under \$6, ...	828	1,221	2,049	935	1,346	2,281
\$6 but under \$7, ...	2,123	1,444	3,567	1,996	1,433	3,429
\$7 but under \$8, ...	1,970	1,215	3,185	2,044	1,151	3,195
\$8 but under \$9, ...	1,451	604	2,055	1,426	777	2,203
\$9 but under \$10, ...	1,451	352	1,803	1,531	372	1,903
\$10 but under \$12, ...	1,215	197	1,412	1,325	200	1,525
\$12 but under \$15, ...	754	50	804	886	61	947
\$15 but under \$20, ...	385	1	386	373	4	377
\$20 and over, ...	181	—	181	188	—	188
TOTALS, ...	11,409	6,754	18,163	11,870	7,043	18,913

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Proportion and Days	Percent- ages
Average proportion of business done, . . .	70.30	78.58	+8.28	+11.78
Average number of days in operation, . . .	264.69	282.90	+18.21	+6.88

WORSTED GOODS. 1896, 1897.**ESTABLISHMENTS, PARTNERS, ETC.**

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DE- CREASE (-), OR NO CHANGE (=), IN 1897	
			Number	Percent- ages
Number of establishments reporting, . . .	31	31	=	-
Number of private firms, ...	15	15	=	-
Number of partners, ...	33	33	=	-
Males, ...	29	29	=	-
Females, ...	1	1	=	-
Special, ...	3	3	=	-
Number of corporations, ...	16	16	=	-
Number of stockholders, ...	508	558	+50	+9.84
Males, ...	318	339	+21	+6.60
Females, ...	128	153	+25	+19.53
Banks, trustees, etc., ...	62	66	+4	+6.45
Aggregates: partners and stockholders, .	541	591	+50	+9.24

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$14,623,706	\$16,397,790	+\$1,774,084	+12.13

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$10,641,690	\$14,676,178	+\$4,034,488	+37.91

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$17,829,822	\$24,111,098	+\$6,281,276	+35.23

WORSTED GOODS — 1896, 1897 — Continued.

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	10,951	12,705	+1,754	+16.02
Smallest number, ...	6,391	11,501	+5,110	+79.96
Greatest number, ...	13,005	13,813	+808	+6.21
Excess of greatest over smallest number, .	6,614	2,312	—4,302	—65.04

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	6,517	5,862	12,379	6,426	5,482	11,908
February, ...	6,576	5,886	12,462	6,638	5,579	12,217
March, ...	5,949	5,247	11,196	6,789	5,699	12,488
April, ...	6,022	5,261	11,283	7,065	5,873	12,938
May, ...	5,877	5,163	11,040	6,963	5,922	12,885
June, ...	4,885	4,584	9,419	6,780	5,789	12,569
July, ...	4,685	4,291	8,976	6,781	5,817	12,598
August, ...	5,149	4,660	9,809	6,881	5,820	12,701
September, ...	4,931	4,350	9,281	6,932	5,811	12,743
October, ...	6,076	5,374	11,450	7,205	6,052	13,257
November, ...	6,030	5,831	11,861	7,223	6,188	13,411
December, ...	6,436	5,761	12,247	6,861	5,960	12,821

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$3,819,656	\$4,523,314	+\$708,658	+18.55
Average yearly earnings, ...	348.80	356.42	+7.62	+2.18

WORSTED GOODS — 1896, 1897 — Concluded.

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	671	1,496	2,167	737	1,346	2,083
\$5 but under \$6, ...	747	1,858	2,605	743	1,873	2,616
\$6 but under \$7, ...	1,097	1,476	2,573	1,096	1,653	2,749
\$7 but under \$8, ...	1,234	610	1,844	1,263	632	1,895
\$8 but under \$9, ...	577	352	929	623	368	991
\$9 but under \$10, ...	654	231	885	748	232	980
\$10 but under \$12, ...	906	163	1,159	1,130	223	1,353
\$12 but under \$15, ...	648	24	672	777	85	812
\$15 but under \$20, ...	170	3	173	196	5	201
\$20 and over, ...	97	2	99	101	2	103
TOTALS, ...	6,891	6,215	13,106	7,414	6,369	13,783

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Proportion and Days	Percent-ages
Average proportion of business done, ...	68.90	84.94	+16.04	+23.28
Average number of days in operation, ...	235.44	294.43	+58.99	+25.05

ALL INDUSTRIES. 1896, 1897.

ESTABLISHMENTS, PARTNERS, ETC.

NUMBER OF ESTABLISHMENTS CONSIDERED, PARTNERS, ETC.	1896	1897	INCREASE (+), DECREASE (—), OR NO CHANGE (=), IN 1897	
			Number	Percent-ages
Number of establishments reporting, ...	4,695	4,695	=	-
Number of private firms, ...	3,566	3,522	-34	-0.96
Number of partners, ...	5,659	5,529	-130	-2.30
Males, ...	5,402	5,286	-116	-2.15
Females, ...	152	143	-9	-5.92
Special, ...	42	40	-2	-4.76
Estates, ...	63	60	-3	-4.76
Number of corporations, ...	1,091	1,124	+33	+3.02
Number of stockholders, ...	42,452	43,684	+1,182	+2.78
Males, ...	24,392	24,643	+251	+1.03
Females, ...	13,471	13,954	+483	+3.59
Banks, trustees, etc., ...	4,589	5,037	+448	+9.76
Aggregates: partners and stockholders, ...	48,111	49,163	+1,052	+2.19

ALL INDUSTRIES — 1896, 1897 — Continued.

CAPITAL INVESTED.

CAPITAL INVESTED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Amount of capital invested, ...	\$390,799,877	\$394,371,301	+\$13,571,514	+3.56

STOCK USED. AGGREGATE VALUES.

STOCK USED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of stock used, ...	\$317,241,327	\$330,154,301	+\$12,912,974	+4.07

GOODS MADE. AGGREGATE VALUES.

GOODS MADE.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amount	Percent- age
Total value of goods made and work done, .	\$559,880,511	\$576,877,064	+\$16,996,553	+3.04

PERSONS EMPLOYED.

PERSONS EMPLOYED.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Number	Percent- ages
Average number, ...	305,492	313,816	+8,324	+2.72
Smallest number, ...	241,363	260,970	+19,607	+8.12
Greatest number, ...	358,529	363,774	+5,245	+1.46
Excess of greatest over smallest number, .	117,166	102,804	—14,362	—12.26

PERSONS EMPLOYED: BY MONTHS.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
January, ...	205,818	104,960	310,778	204,598	106,640	310,238
February, ...	208,644	106,037	314,681	205,721	105,794	311,515
March, ...	209,634	105,675	315,309	208,480	107,020	315,500
April, ...	209,871	104,582	314,403	212,314	107,760	320,064
May, ...	210,988	104,801	315,789	212,884	107,545	320,429
June, ...	206,014	101,332	307,346	207,932	103,746	311,678

ALL INDUSTRIES — 1896, 1897 — Concluded.
PERSONS EMPLOYED: BY MONTHS — Concluded.

MONTHS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
July, ...	198,307	94,501	292,808	201,930	99,586	301,516
August, ...	192,979	90,306	283,285	200,856	96,275	297,131
September, ...	194,726	93,308	288,034	208,955	106,000	314,955
October, ...	202,831	101,157	303,988	212,100	108,847	320,947
November, ...	203,638	102,554	306,192	211,707	108,982	320,689
December, ...	206,079	104,462	309,531	209,997	108,860	318,857

WAGES AND EARNINGS.

WAGES AND EARNINGS.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Amounts	Percent- ages
Total amount paid in wages, ...	\$130,339,959	\$132,334,075	+\$1,994,116	+1.53
Average yearly earnings, ...	426.66	421.69	—4.97	—1.16

CLASSIFIED WEEKLY EARNINGS.

CLASSIFICATION OF WEEKLY EARNINGS.	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	19,817	31,264	50,581	20,596	32,166	52,762
\$5 but under \$6, ...	13,198	22,445	35,643	13,752	23,129	36,881
\$6 but under \$7, ...	20,472	21,704	42,176	20,846	22,776	43,622
\$7 but under \$8, ...	22,320	16,276	38,596	22,524	16,433	38,957
\$8 but under \$9, ...	22,184	11,113	33,297	21,731	11,670	33,401
\$9 but under \$10, ...	28,940	6,742	35,682	28,979	6,598	35,577
\$10 but under \$12, ...	33,403	5,084	38,487	34,106	5,152	39,258
\$12 but under \$15, ...	39,189	2,438	41,627	39,809	2,528	42,337
\$15 but under \$20, ...	29,651	840	30,491	28,635	724	29,359
\$20 and over, ...	9,613	166	9,779	9,000	141	9,141
TOTALS, ...	238,257	118,072	356,329	239,978	121,317	361,295

PROPORTION OF BUSINESS DONE.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION.	1896	1897	INCREASE (+) OR DECREASE (—) IN 1897	
			Proportion and Days	Percent- ages
Average proportion of business done, ...	59.99	59.72	—0.27	—0.45
Average number of days in operation, ...	281.03	283.33	+2.30	+0.82

ANALYSIS.



ANALYSIS.

The statistical presentations contained in this report are mainly based upon the returns made in 1896 and 1897 by 4,695 establishments, engaged in the manufacturing and mechanical industries of the Commonwealth.

These establishments are classified in 77 industries, and the plan of the report involves comparisons for the two consecutive years, based upon returns from identical establishments, that is, establishments each of which made return in both years. The comparisons are, therefore, between figures compiled upon exactly the same method in each of the years compared, and the percentages derived from the comparisons, showing either increase or decrease, may be accepted as indicating the rate of increase or decrease for the industry as a whole, although the number of establishments whose returns actually enter into the presentations is less than the entire number in the State as determined by the method of enumeration followed in the Decennial Census.

It should be understood that numerical aggregates for all establishments included in the Census are not given in this report. Its purpose, as stated in a previous volume, is to exhibit the trend of industrial progress or to note decline, if it occurs, by means of percentages based upon comparisons between returns made from a large number of typical establishments in each of two successive years, and in connection with other similar reports previously issued or to be hereafter prepared, in the series of which this volume forms a part, to supplement the results obtained in the Census at periods widely separated, by data obtained in the inter-censal years from establishments covering a large percentage of the annual output.

Wherever the term "All Industries" is used in this volume, it is to be understood as referring only to the 77 classified in-

dustries mentioned in the first table (pages 4 to 7) and wherever numerical aggregates are presented, of establishments, capital, stock used, goods made, persons employed, or wages paid, only such aggregates are intended (unless expressly otherwise stated in the text) as are derived from the 4,695 establishments used in the comparisons. The percentage rates, however, may be accepted as referring to the entire number of establishments engaged in the industries, whether such establishments are put into comparison or not, and in the Introduction, pages xiii-xv, the reader will find the estimated output for the entire number of establishments, in certain industries and in All Industries, for the years 1896 and 1897, computed from the percentage rates of increase or decrease derived from the returns made for the annual comparison, and also the output in the same industries for the year 1895, as determined by the Decennial Census.

On pages 1 to 104 there will be found general statistics by industries, arranged under the sub-heads of Private Firms and Corporations; Partners and Stockholders; Capital Invested; Stock Used; Goods Made; Persons Employed; Wages Paid; and Proportion of Business Done and Days in Operation. The second section, pages 105 to 148, is devoted to detailed presentations for 15 leading industries, all of the statistical facts relating to each industry being grouped under its proper title. This analysis, however, deals only with the presentations contained in the first section, pages 1 to 104.

PRIVATE FIRMS AND CORPORATIONS; PARTNERS AND STOCKHOLDERS: BY INDUSTRIES.

The presentations covering the management of the 4,695 establishments reviewed in this volume will be found on pages 4 to 11. These establishments were, in 1896, managed by 3,556 private firms and 1,091 corporations, and in 1897, by 3,522 private firms and 1,124 corporations, a decrease in the number of private firms of 34, or 0.96 per cent, and an increase in the number of corporations of 33, or 3.02 per cent.

The apparent discrepancy in the above figures is fully explained in the head-notes to the presentations on pages 4 and 5 and 8 and 9. Duplications occur so far as the number of

private firms and corporations and partners and stockholders are concerned, for the reason that one firm or corporation may carry on two or more establishments in the same or in different towns and industries. The plan adopted in the statistical presentations is to consider each establishment, whether managed in connection with another or not, as a unit, and to credit to each industry its own number of private firms and partners and corporations and stockholders; but, when considering the total for All Industries, to omit the duplicates. The word "establishment," as used in this report, means the factory, mill, or shop from which a report was received, and not the firm or corporation owning or controlling said factory, mill, or shop. There are no duplications so far as the establishments are concerned.

The following table exhibits the number of duplications in private firms, corporations, partners, and stockholders for the years 1896 and 1897:

INDUSTRIES.	PRIVATE FIRMS		CORPORATIONS		PARTNERS		STOCKHOLDERS	
	1896	1897	1896	1897	1896	1897	1896	1897
Boots and shoes, ...	-	-	1	1	-	-	8	9
Boxes, barrels, kegs, etc., . .	1	1	-	-	1	1	-	-
Carriages and wagons, . . .	1	1	-	-	2	2	-	-
Cooking, lighting, and heating apparatus, ...	-	-	1	1	-	-	9	8
Cordage and twine, ...	-	-	1	1	-	-	6	6
Cotton goods, ...	-	-	4	4	-	-	109	110
Food preparations, ...	1	1	*4	*4	1	1	11	12
Furniture, ...	-	-	-	1	-	-	-	500
Hosiery and knit goods, . . .	-	-	1	1	-	-	210	217
Leather, ...	2	2	1	1	5	5	78	79
Lumber, ...	1	1	-	-	2	2	-	-
Machines and machinery, . .	1	1	1	1	2	2	15	17
Metals and metallic goods, .	1	1	-	-	1	1	-	-
Paper, ...	1	1	4	4	1	1	38	37
Print works, dye works, and bleacheries, ...	-	-	8	8	-	-	724	739
Railroad construction and equipment, ...	-	-	†7	†7	-	-	-	-
Rubber and elastic goods, . .	1	1	1	1	1	2	41	40
Stone, ...	1	1	-	-	3	3	-	-
Woollen goods, ...	4	4	3	3	9	9	741	748
Worsted goods, ...	-	-	1	1	-	-	210	265
TOTALS, ...	15	15	33	34	28	29	2,200	2,787

* Includes three syndicates.

† Railroads.

Only the number of private firms and corporations and the number of partners and stockholders are affected by these duplications. The returns relative to capital invested, stock used, goods made, persons employed, wages paid, etc., are made separately for each establishment, and in the tabular presentations are credited to the industry to which they properly belong.

In the following table, is shown the effect, in the aggregate, of the change from private firms to corporations in 1897 as compared with 1896 :

CLASSIFICATION.	NUMBER		PERCENTAGES	
	1896	1897	1896	1897
Private firms, ...	3,556	3,522	76.52	75.81
Corporations, ...	1,091	1,124	23.48	24.19
TOTALS, ...	4,647	4,646	100.00	100.00

From the above table we note that of the whole number of establishments, 76.52 per cent were managed by private firms and 23.48 per cent were under the control of corporations in 1896. A slight change occurs in 1897, 75.81 per cent of the establishments being under the management of private firms and 24.19 per cent of corporations. In other words, there was a change of about one per cent (0.71) in the control of the establishments, there being a loss of that amount to private firms and a corresponding gain to corporations. These figures, as in the past, indicate the prevailing tendency toward the corporate form of management.

The total number of partners in 1896 was 5,659, falling in 1897 to 5,529, a decrease, of 130 persons, or 2.30 per cent. A classification of partners by sex is shown for each year in the following table :

PARTNERS.	NUMBER		PERCENTAGES	
	1896	1897	1896	1897
Males, ...	5,402	5,286	95.46	95.00
Females, ...	152	143	2.69	2.59
Specials and estates, ...	105	100	1.85	1.81
TOTALS, ...	5,659	5,529	100.00	100.00

The males carrying on these private firms constituted 95.46 per cent of the whole number in 1896 and 95.60 per cent in 1897. The number of females fell from 152 to 143, constituting 2.69 per cent of the total number of partners in 1896 and 2.59 per cent in 1897.

The total number of stockholders in 1896 was 42,452, rising in 1897 to 43,634, an increase of 1,182, or 2.78 per cent. The following table presents a classification of stockholders by sex:

STOCKHOLDERS.	NUMBER		PERCENTAGES	
	1896	1897	1896	1897
Males, ...	24,392	24,643	57.46	56.48
Females, ...	13,471	13,964	31.73	31.98
Banks, trustees, etc., ...	4,589	5,037	10.81	11.54
TOTALS, ...	42,452	43,634	100.00	100.00

There is no very large variation shown in the above table so far as the sex of the stockholders is concerned, practically 57 per cent being males in each year and 32 per cent females.

The next analysis table exhibits the effect of the change from the private firm to the corporation upon the number of partners and stockholders in the aggregate and in the average.

CLASSIFICATION.	NUMBER	
	1896	1897
Private firms, ...	3,556	3,522
Partners, ...	5,669	5,520
Average number of partners to a private firm, ...	1.59	1.57
Corporations, ...	1,091	1,124
Stockholders, ...	42,452	43,634
Average number of stockholders to a corporation, ...	38.91	38.82

There is practically no change in the average number of partners to a private firm in 1896 and 1897, the averages being 1.59 and 1.57, respectively. The same is true of the average

number of stockholders to a corporation, the average being in 1896, 38.91 and in 1897, 38.82.

The returns relating to private firms, corporations, partners, and stockholders for 1897 are condensed in the following summary: The returns represent 4,695 establishments found in 77 industries. The establishments are conducted by 3,522 private firms and 1,124 corporations, or, in other words, 75.81 per cent of the establishments are in the hands of private firms and 24.19 per cent are controlled by corporations. The private firms are managed by 5,529 persons, of whom 5,286, or 95.60 per cent, are males, 143, or 2.59 per cent, are females, and 100, or 1.81 per cent are special partners and estates. The corporations are managed by 43,634 persons, of whom 24,643, or 56.48 per cent, are males; 13,954, or 31.98 per cent, are females; and 5,037, or 11.54 per cent, are banks, trustees, etc. The average number of partners to a private firm is 1.57 and the average number of stockholders to a corporation, 38.82.

CAPITAL INVESTED: BY INDUSTRIES.

On pages 14 and 15 will be found a comparison of the amount of capital invested in each of the 77 industries in 1896 and 1897. The total amount of capital reported in 1896 was \$380,799,877 and in 1897, \$394,371,391, an increase in the latter year of \$13,571,514, or 3.56 per cent.

The following industries, 46 in number, show an increase in capital invested in 1897 as compared with 1896:

Arms and Ammunition.	Cordage and Twine.
Artisans' Tools.	Crayons, Pencils, Crucibles, etc.
Bicycles, Tricycles, etc.	Dyestuffs.
Boots and Shoes.	Earthen, Plaster, and Stone Ware.
Boxes, Barrels, Kegs, etc.	Electrical Apparatus and Appliances.
Brick, Tiles, and Sewer Pipe.	Electroplating.
Burial Cases, Caskets, Coffins, etc.	Fancy Articles, etc.
Buttons and Dress Trimmings.	Fertilizers.
Carpetings.	Fireworks and Matches.
Clocks, Watches, and Jewelry.	Furniture.
Clothing.	Glass.
Cooking, Lighting, and Heating Apparatus	Hair Work (Animal and Human).

Hose : Rubber, Linen, etc.
 Hosiery and Knit Goods.
 Ivory, Bone, Shell, and Horn Goods,
 etc.
 Leather.
 Liquors : Malt, Distilled, and Fer-
 mented.
 Lumber.
 Machines and Machinery.
 Metals and Metallic Goods.
 Mixed Textiles.
 Models, Lasts, and Patterns.
 Paints, Colors, and Crude Chemicals.

Paper.
 Rubber and Elastic Goods.
 Scientific Instruments and Appli-
 ances.
 Shipbuilding.
 Silk and Silk Goods.
 Tallow, Candles, Soap, and Grease.
 Tobacco, Snuff, and Cigars.
 Toys and Games (Children's).
 Wooden Goods.
 Woollen Goods.
 Worsted Goods.

The percentages of increase range from 0.05 in Paper to 56.72 in Furniture.

The following 31 industries exhibit a decrease in the amount of capital invested in 1897 as compared with 1896 :

Agricultural Implements.
 Awnings, Sails, Tents, etc.
 Boxes (Paper) and Paper Goods.
 Brooms, Brushes, and Mops.
 Building Materials.
 Carriages and Wagons.
 Cement, Kaolin, Lime, and Plaster.
 Chemical Preparations (Compound-
 ed).
 Cotton Goods.
 Drugs and Medicines.
 Emery and Sand Paper and Cloth,
 etc.
 Fine Arts and Taxidermy.
 Flax, Hemp, Jute, and Linen Goods.
 Food Preparations.
 Glue, Isinglass, and Starch.
 Ink, Mucilage, and Paste.
 Liquors and Beverages (Not Spirit-
 uous).

Musical Instruments and Materials.
 Oils and Illuminating Fluids.
 Perfumes, Toilet Articles, etc.
 Photographs and Photographic Ma-
 terials.
 Polishes and Dressing.
 Printing, Publishing, and Bookbind-
 ing.
 Print Works, Dye Works, and Bleach-
 eries
 Railroad Construction and Equip-
 ment.
 Saddlery and Harness.
 Sporting and Athletic Goods.
 Stone.
 Straw and Palm Leaf Goods.
 Trunks and Valises.
 Whips, Lashes, and Stocks.

The percentages of decrease range from 0.12 in Food Pre-
 parations to 32.61 in Perfumes, Toilet Articles, etc.

A comparison for the nine leading industries is brought
 forward in the following table :

INDUSTRIES.	Number of Estab-lishments Con-sidered	AMOUNT OF CAPITAL INVESTED		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Amounts	Percent-ages
Boots and shoes, ...	675	\$21,550,886	\$23,014,435	+ \$1,463,549	+6.79
Carpetings, ...	12	6,063,982	6,784,921	+720,939	+11.89
Cotton goods, ...	163	112,561,310	110,655,603	-1,905,707	-1.69
Leather, ...	126	6,995,486	7,559,363	+563,877	+8.06
Machines and machinery, .	360	26,058,192	27,574,500	+1,516,308	+5.82
Metals and metallic goods, .	384	17,570,592	18,308,737	+738,145	+4.20
Paper, ...	91	20,977,979	20,989,176	+11,197	+0.05
Woollen goods, ...	117	21,655,680	25,390,647	+3,734,967	+17.25
Worsted goods, ...	31	14,623,706	16,397,790	+1,774,084	+12.13
Nine industries, ...	1,959	248,057,793	256,675,172	+8,617,379	+3.47
Other industries, ...	2,736	132,742,084	137,096,219	+4,354,135	+3.73
All industries, ...	4,695	380,799,877	394,371,391	+13,571,514	+3.56

The industries mentioned in detail in the above table are the principal industries of the State. The capital invested in the establishments returned in them was \$248,057,793 in 1896 and \$256,675,172 in 1897, or 65.14 per cent of the total capital for All Industries as returned for the year 1896, and 65.08 per cent in 1897. With the exception of Cotton Goods, an increase in the amount of capital invested is shown for each of the nine leading industries.

Unwarranted deductions should not be made regarding increase or decrease in investment as shown by these figures, nor should the returns as given in this volume be compared with those published in that of the preceding year, without due consideration of the other elements. The comparisons are made upon the same basis each year, but each volume should be considered by itself. The term "capital" as used in these reports does not mean merely cash capital or capital stock, but includes all forms of capital devoted to production, such as cash, value of buildings, land, machinery and fixtures, implements and tools, and stock on hand or in process of manufacture; therefore, the aggregate amounts given as capital invested in the different industries, include the actual capital of all forms found in the industry at the time of making the return, and it is obvious that some of the elements included are variable from year to year. A small amount of stock on hand or in process of manufacture at the time the return is

made would have its effect in showing diminished capitalization, without, of course, affecting the condition of the industry; and, on the other hand, an investment in stock purchased in a favorable market, the same being held at the time of making the return, would render the amount of capital invested relatively larger than would be found at a time when the stock on hand was comparatively light.

In this connection we reproduce below the remarks concerning capital invested, published in Volume V of the Decennial Census of 1895 :

“Of all the elements entering into industrial statistics, the returns as to capital are the most difficult to obtain and the least satisfactory in their results. In the first place it is neither expected nor desired to obtain information as to capital which will show the financial status of the establishments. We wish to determine the amount of capital devoted to production, not to show the assets and liabilities of the corporations and private firms. Manifestly this is not shown by a statement of share capital, nor by the amount of money put into the establishments by the partners or stockholders. A considerable amount is always borrowed in addition to the personal investment of those who actually own the business; and if this credit capital is not included, the capital devoted to production will be understated, and all deductions as to the relation of output, etc., to capital, will be erroneous.

In early Censuses capital, for this and various other reasons, was generally understated. Thus, in remarks upon the tables of manufacturing industry, Ninth Census of the United States, 1870, the late Francis A. Walker, Superintendent, says :

The Census returns of capital invested in manufactures are entirely untrustworthy and delusive. * * * No man in business knows what he is worth — far less can say what portion of his estate is to be treated as capital. With respect, indeed, to corporations having a determinate capital stock, the difficulty of making a correct return in this particular becomes very much reduced. * * * Where, however, business is carried on outside of incorporated companies, the difficulty of obtaining even an approximate return of capital, resulting from the nature of the inquiry itself * * * becomes such as to render success hopeless. So numerous are the constructions, possible and even reasonable, in respect to what constitutes manufacturing capital, that anything like harmony or consistency of treatment is not to be expected of a large body of officials pursuing their work independently of each other.

Since this was written, however, much progress has been made both in making the form of inquiry distinct and unmistakable, and in securing full returns. In the Massachusetts Census of 1875, little more was obtained than stock or share capital in the case of corporations, and the personal investments in cash in the case of private firms. In 1885, the Analysis of the subject of capital contains this explanatory statement :

The Bureau, in making investigations some seven years ago, ascertained in the case of a number of large corporations that their nominal capital invested was not more than one-third of the capital used and necessary to carry on the business as it then existed. It was then decided that in the Census of 1885 an attempt should be made to secure more complete and reliable statistics of capital invested. It was comparatively easy to ask for the value of the real or fixed items of capital, such as land, buildings and fixtures, machinery, implements and tools, and cash. Beyond this was an enumeration that had not been touched upon by statisticians, and it was foreseen that such an investigation must be to a great extent tentative. Nevertheless, a conscientious attempt has been made by the Census Office to secure statistics of "credit capital," which is as essential to the carrying on of a great establishment as the real or cash capital, but which has, in the past, been entirely omitted from the returns.

The returns as to capital were also classified so as to show the amount invested in the plant, covering land, buildings and fixtures, machinery, implements and tools, the amount of cash, and the amount of credit capital. These classified items were then totalized under the head "Total Real (fixed), Cash, and Credit Capital Invested."

It is probable, however, that the introduction of the inquiry as to credit capital led to duplications of capital in nearly every return in 1885, when, as must have been the case, the money borrowed had been invested in some one of the items separately returned, or else was held as cash, also separately returned. That is, either the items "land," "buildings," and the rest, including the item of "cash," were returned *less the amount of credit capital*, which is improbable, or the item "credit capital," returned in the aggregate was returned *less the amount already appearing under the head of "land," "buildings," etc.*, which is also improbable, or else the total amount of capital invested, obtained by combining the amount returned under each head separately, was unduly enlarged by duplications.

This duplication of credit capital already returned under other heads was apparently avoided in the returns as to capital in the Eleventh United States Census, 1890, which, although closely following the form used in Massachusetts in 1885, did not call for credit capital separately. Finished products on hand (a) ; bills receivable (b) ; and ledger accounts (c), were, however, included under the head of capital. Undoubtedly these items should be included if it is desired to know the *assets* of the establishments, but it seems equally clear that none of them should be included if the aggregate is to show only the capital devoted to production. The item (a) is *product*, not capital. It is an asset, of course, but by so much as capital is increased by including it, the deductions which follow in the Census report as to "Amount of Capital required for a product value of \$100," and especially deductions as to the relation of profit to capital, sure to be made, are invalidated. The same statement applies to items (b) and (c), which, while assets, are simply paper assets, not available for use in production until realized upon, when the proceeds will take their proper place under the head of "cash," or will be invested in "land," "buildings," "machinery and tools," etc.

The experience of this Department, in the annual collection of statistics of manufactures, since 1885, has finally led to the adoption of seven speci-

fied items, which are believed to cover the various forms in which industrial capital devoted to production appears, namely:

- A. Value of LAND occupied by the establishment (if owned).
- B. Value of BUILDINGS and Fixtures (if owned).
- C. Value of MACHINERY and Motive Power (if owned).
- D. Value of IMPLEMENTS and TOOLS (not included under C).
- E. Value of PATENT RIGHTS, PATTERNS, etc. (if owned).
- F. CASH on hand and in bank at the date of making the return.
- G. Value, at cost, of RAW MATERIALS and ARTICLES TO BE USED IN THE INDUSTRY, on hand at the date of making the return, including goods in process of manufacture.

Clearly, items A to F in the list of inquiries above given include forms of capital necessary to carry on the establishments. They are all items of capital devoted to production. As to the item G, the case is not so plain. It includes items of "stock" and also items of "product," although as yet incomplete. At all events, they are forms of capital invested antecedent to the completion of the productive processes, and necessary for, indeed, actually employed in, those processes. The inquiries as they stand at least have the merit of being distinct, susceptible of definite replies without duplications, and seem to omit none of the capital devoted to production."

STOCK USED: BY INDUSTRIES.

The term "stock used" includes all kinds of materials used in the establishment, whether entering into the construction of the articles manufactured, or consumed in the processes necessary to the production of the goods.

On pages 18 and 19 a comparison of the value of stock used in the 4,695 establishments making return in each of the years 1896 and 1897 is shown. The aggregate value of stock used was \$317,241,327 in 1896 and \$330,154,301 in 1897, an increase of \$12,912,974, or 4.07 per cent.

The following 38 industries show an increase in the value of stock used in 1897 as compared with 1896:

Arms and Ammunition.	Dyestuffs
Boots and Shoes.	Electroplating.
Boxes, Barrels, Kegs, etc.	Emery and Sand Paper and Cloth, etc.
Boxes (Paper) and Paper Goods.	Fancy Articles, etc.
Buttons and Dress Trimmings.	Fireworks and Matches.
Carpetings.	Flax, Hemp, Jute, and Linen Goods.
Chemical Preparations (Compound- ed).	Food Preparations.
Clocks, Watches, and Jewelry.	Furniture.
Clothing.	Glue, Isinglass, and Starch.
Crayons, Pencils, Crucibles, etc.	Hose: Rubber, Linen, etc.

Ink, Mucilage, and Paste.	Print Works, Dye Works, and Bleacheries.
Ivory, Bone, Shell, and Horn Goods, etc.	Saddlery and Harness.
Leather.	Scientific Instruments and Appliances.
Liquors and Beverages (Not Spirituous).	Silk and Silk Goods.
Lumber.	Toys and Games (Children's).
Mixed Textiles.	Whips, Lashes, and Stocks.
Musical Instruments and Materials.	Wooden Goods.
Paints, Colors, and Crude Chemicals.	Woollen Goods.
Photographs and Photographic Materials.	Worsted Goods.

The increase ranges from 0.49 per cent in Flax, Hemp, Jute, and Linen Goods to 37.91 per cent in Worsted Goods.

The following industries, 39 in number, show a decrease in the value of stock used in 1897 as compared with 1896 :

Agricultural Implements.	Hosiery and Knit Goods.
Artisans' Tools.	Liquors: Malt, Distilled, and Fermented.
Awnings, Sails, Tents, etc.	Machines and Machinery.
Bicycles, Tricycles, etc.	Metals and Metallic Goods.
Brick, Tiles, and Sewer Pipe.	Models, Lasts, and Patterns.
Brooms, Brushes, and Mops.	Oils and Illuminating Fluids.
Building Materials.	Paper.
Burial Cases, Caskets, Coffins, etc.	Perfumes, Toilet Articles, etc.
Carriages and Wagons.	Polishes and Dressing.
Cement, Kaolin, Lime, and Plaster.	Printing, Publishing, and Bookbinding.
Cooking, Lighting, and Heating Apparatus.	Railroad Construction and Equipment.
Cordage and Twine.	Rubber and Elastic Goods.
Cotton Goods.	Shipbuilding.
Drugs and Medicines.	Sporting and Athletic Goods.
Earthen, Plaster, and Stone Ware.	Stone.
Electrical Apparatus and Appliances.	Straw and Palm Leaf Goods.
Fertilizers.	Tallow, Candles, Soap, and Grease.
Fine Arts and Taxidermy.	Tobacco, Snuff, and Cigars.
Glass.	Trunks and Valises.
Hair Work (Animal and Human).	

The range of decrease is from 0.38 per cent in Cotton Goods to 27.88 per cent in Railroad Construction and Equipment.

For the purpose of comparing the value of stock used in the nine leading industries, the following table is presented :

INDUSTRIES.	Number of Establishments Considered	VALUE OF STOCK USED		INCREASE (+) OR DECREASE (—) IN 1897	
		1896	1897	Amounts	Percentages
Boots and shoes, ...	675	\$57,383,071	\$61,012,700	+\$3,629,629	+6.33
Carpetings, ...	12	3,445,442	3,898,404	+452,962	+13.15
Cotton goods, ...	163	49,172,309	48,987,402	—184,907	—0.38
Leather, ...	126	13,166,483	16,195,365	+3,028,882	+23.00
Machines and machinery, .	360	10,377,522	8,978,151	—1,399,371	—13.48
Metals and metallic goods, .	384	10,321,786	9,953,944	—367,842	—3.56
Paper, ...	91	11,825,894	11,387,275	—438,619	—3.71
Woollen goods, ...	117	12,183,271	15,036,303	+2,853,032	+23.42
Worsted goods, ...	31	10,641,690	14,676,178	+4,034,488	+37.91
Nine industries, ...	1,959	178,517,468	190,125,722	+11,608,254	+6.50
Other industries, ...	2,736	138,723,859	140,028,579	+1,304,720	+0.94
All industries, ...	4,695	317,241,327	330,154,301	+12,912,974	+4.07

The value of stock used in 1896 in the establishments classified under the nine leading industry heads was \$178,517,468, and in 1897, \$190,125,722, representing 56.27 per cent of the total stock used in All Industries in 1896, and 57.59 per cent in 1897.

GOODS MADE: BY INDUSTRIES.

The presentation, pages 22 and 23, shows a comparison of the value of goods made and work done in the establishments making returns for the years 1896 and 1897. The total value of goods made and work done in the 4,695 establishments was, in 1896, \$559,880,511, and in 1897, \$576,877,064, an increase in the last named year of \$16,996,553, or 3.04 per cent.

The following 42 industries exhibit an increase in the value of goods made and work done in 1897 as compared with 1896 :

Arms and Ammunition.
Boots and Shoes.
Boxes, Barrels, Kegs, etc.
Boxes (Paper) and Paper Goods.
Buttons and Dress Trimmings.
Carpetings.
Chemical Preparations (Compound-
ed).
Clocks, Watches, and Jewelry.
Clothing.

Cooking, Lighting, and Heating
Apparatus.
Crayons, Pencils, Crucibles, etc.
Drugs and Medicines.
Dyestuffs.
Electrical Apparatus and Appliances.
Emery and Sand Paper and Cloth,
etc.
Fancy Articles, etc.
Fireworks and Matches.

Flax, Hemp, Jute, and Linen Goods.	Paper.
Food Preparations.	Photographs and Photographic Materials.
Furniture.	Polishes and Dressing.
Glass.	Print Works, Dye Works, and Bleacheries.
Glue, Isinglass, and Starch.	Saddlery and Harness.
Ink, Mucilage, and Paste.	Scientific Instruments and Appliances.
Ivory, Bone, Shell, and Horn Goods, etc.	Silk and Silk Goods.
Leather.	Sporting and Athletic Goods.
Liquors: Malt, Distilled, and Fermented.	Toys and Games (Children's).
Lumber.	Whips, Lashes, and Stocks.
Mixed Textiles.	Woollen Goods.
Musical Instruments and Materials.	Worsted Goods.
Paints, Colors, and Crude Chemicals.	

The range of increase is from 0.05 per cent in Arms and Ammunition to 44.64 per cent in Mixed Textiles.

The following 35 industries exhibit a decrease in the value of goods made and work done in 1897 as compared with 1896 :

Agricultural Implements.	Liquors and Beverages (Not Spirituous).
Artisans' Tools.	Machines and Machinery.
Awnings, Sails, Tents, etc.	Metals and Metallic Goods.
Bicycles, Tricycles, etc.	Models, Lasts, and Patterns.
Brick, Tiles, and Sewer Pipe.	Oils and Illuminating Fluids.
Brooms, Brushes, and Mops.	Perfumes, Toilet Articles, etc.
Building Materials.	Printing, Publishing, and Bookbinding.
Burial Cases, Caskets, Coffins, etc.	Railroad Construction and Equipment.
Carriages and Wagons	Rubber and Elastic Goods.
Cement, Kaolin, Lime, and Plaster.	Shipbuilding
Cordage and Twine.	Stone.
Cotton Goods.	Straw and Palm Leaf Goods.
Earthen, Plaster, and Stone Ware.	Tallow, Candles, Soap, and Grease.
Electroplating.	Tobacco, Snuff, and Cigars.
Fertilizers.	Trunks and Valises.
Fine Arts and Taxidermy.	Wooden Goods.
Hair Work (Animal and Human).	
Hose: Rubber, Linen, etc.	
Hosiery and Knit Goods.	

The range of decrease is from 0.17 per cent in Cotton Goods to 23.85 per cent in Cement, Kaolin, Lime, and Plaster.

In the following table is given a comparison of the value

of goods made and work done for the nine leading industries :

INDUSTRIES.	Number of Establishments Considered	VALUE OF GOODS MADE AND WORK DONE		INCREASE (+) OR DECREASE (—) IN 1897	
		1896	1897	Amounts	Percentages
Boots and shoes, ...	675	\$93,590,910	\$99,773,896	+ \$6,182,986	+6.61
Carpetings, ...	12	5,941,456	6,364,709	+423,253	+7.12
Cotton goods, ...	163	85,561,417	85,414,028	—147,389	—0.17
Leather, ...	126	18,740,542	21,837,377	+3,096,835	+16.52
Machines and machinery, .	360	28,455,766	25,159,094	—3,296,672	—11.59
Metals and metallic goods, .	384	22,774,663	22,172,268	—602,395	—2.65
Paper, ...	91	19,865,086	19,933,083	+67,947	+0.34
Woollen goods, ...	117	20,885,906	25,599,328	+4,713,422	+22.57
Worsted goods, ...	31	17,829,822	24,111,098	+6,281,276	+35.23
Nine industries, ...	1,959	313,645,568	330,364,831	+16,719,263	+5.33
Other industries, ...	2,736	246,234,943	246,512,233	+277,290	+0.11
All industries, ...	4,695	559,880,511	576,877,064	+16,996,553	+3.04

In 1896, the aggregate value of goods made and work done in these nine leading industries was \$313,645,568, and in 1897, \$330,364,831, representing 56.02 per cent of the total value of goods made and work done in All Industries in 1896, and 57.27 per cent in 1897. With the exception of Cotton Goods, Machines and Machinery, and Metals and Metallic Goods an increase in product value is shown in each of the nine leading industries.

In the following table we present the increase or decrease in value of goods made and work done in All Industries as shown in each annual report, beginning with the year 1886 :

COMPARATIVE YEARS.	Number of Establishments Considered in Each Year Compared	INCREASE (+) OR DECREASE (—) IN VALUE OF GOODS MADE AND WORK DONE IN EACH YEAR AS COMPARED WITH THE PREVIOUS YEAR	
		Amounts	Percentages
1886, 1887, ...	1,027	+ \$13,919,859	+5.29
1887, 1888, ...	1,140	+11,168,095	+3.61
1888, 1889, ...	1,364	+9,653,992	+2.45
1889, 1890, ...	3,041	+22,838,970	+4.37
1890, 1891, ...	3,745	+8,068,053	+1.33
1891, 1892, ...	4,473	+33,180,865	+5.37
1892, 1893, ...	4,397	—51,793,852	—8.10
1893, 1894, ...	4,063	—56,798,448	—10.27
1894, 1895, ...	3,629	+43,048,021	+9.18
1895, 1896, ...	4,609	—31,376,727	—5.51
1896, 1897, ...	4,695	+16,996,553	+3.04

The above table shows an increase in the value of goods made and work done in 1887 as compared with 1886 of 5.29 per cent, 1,027 establishments being compared. The increase in product value increased when 1888 is compared with 1887 to 3.61 per cent, 1,140 establishments being compared. An increase is shown in each of the years following until 1893, when, as compared with 1892 a decrease of 8.10 per cent is shown. It will be noted that the number of establishments making returns also increased up to this time, but during the three years following the comparison of 1892 with 1891 a decline is shown, gradually recovering, however, until the time of the present comparison when the largest number is found, accompanied by an increase in the value of goods made and work done of 3.04 per cent. It is not to be assumed that the percentage of decrease in the value of product shown in certain years was altogether due to the decrease in the number of establishments compared, nor, on the contrary, that an increased number of establishments means an increase in the value of goods made and work done. It should be borne in mind that in any two comparative years the returns were made from identical establishments.

PERSONS EMPLOYED: BY INDUSTRIES.

The statistical presentations relative to persons employed will be found on pages 25 to 64. In the analysis table which follows, we bring forward the figures representing the average number of persons employed during the years 1896 and 1897 for the nine leading industries, for other industries, and for All Industries in the aggregate:

INDUSTRIES.	Number of Estab- lishments Con- sidered	AVERAGE NUMBER OF PERSONS EMPLOYED		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Number	Percent- ages
Boots and shoes, ...	675	45,427	47,788	+2,361	+5.20
Carpetings, ...	12	4,325	4,622	+297	+6.87
Cotton goods, ...	163	77,669	79,144	+1,475	+1.90
Leather, ...	126	6,013	6,413	+400	+6.65
Machines and machinery, ...	360	18,503	17,387	-1,116	-6.03
Metals and metallic goods, ...	334	13,709	13,608	-101	-0.74
Paper, ...	91	8,917	9,177	+260	+2.92

INDUSTRIES.	Number of Establishments Considered	AVERAGE NUMBER OF PERSONS EMPLOYED		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Number	Percentages
Woollen goods, ...	117	15,088	16,866	+1,778	+11.78
Worsted goods, ...	31	10,951	12,705	+1,754	+16.02
Nine industries, ...	1,959	200,602	207,710	+7,108	+3.54
Other industries, ...	2,736	104,890	106,106	+1,216	+1.16
All industries, ...	4,695	305,492	313,816	+8,324	+2.72

The final line of the table indicates that in the 4,695 establishments making return in All Industries, an average number of 305,492 persons were employed during the year 1896, and 313,816 persons in 1897, an increase of 8,324 persons, or 2.72 per cent. All of the leading industries, except Machines and Machinery and Metals and Metallic Goods, show an increase in 1897 as compared with 1896, the largest percentage of increase being found in Worsted Goods, in which, on an average, 10,951 persons were employed in the 31 establishments making return in 1896, and 12,705 persons, on an average in 1897, an increase of 16.02 per cent. The average number of persons employed in these nine leading industries represent 65.67 per cent of the aggregate average number employed in All Industries in 1896, and 66.19 per cent in 1897.

The table which follows gives the number of persons employed at the periods of employment of the smallest number in the nine leading industries, other industries, and All Industries :

INDUSTRIES.	Number of Establishments Considered	SMALLEST NUMBER OF PERSONS EMPLOYED		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Number	Percentages
Boots and shoes, ...	675	34,607	38,311	+3,704	+10.70
Carpetings, ...	12	8,502	4,207	+705	+20.13
Cotton goods, ...	163	65,779	69,330	+3,551	+5.40
Leather, ...	128	4,749	5,214	+465	+9.79
Machines and machinery, ...	380	14,907	14,426	-481	-3.23
Metals and metallic goods, ...	384	11,211	11,107	-104	-0.93
Paper, ...	91	7,829	8,260	+431	+5.27
Woollen goods, ...	117	12,056	14,565	+2,510	+20.82
Worsted goods, ...	31	6,391	11,501	+5,110	+79.96
Nine industries, ...	1,959	160,830	176,921	+16,091	+10.00
Other industries, ...	2,736	80,533	84,049	+3,516	+4.37
All industries, ...	4,695	241,363	260,970	+19,607	+8.12

The final line of the table indicates that 241,363 persons were employed at the periods of employment of the smallest number in 1896, and 260,970 persons at the corresponding periods in 1897, an increase of 19,607 persons, or 8.12 per cent. All of the leading industries, except Machines and Machinery and Metals and Metallic Goods, show an increase, the highest percentage of increase being found in Worsted Goods.

A similar comparison for persons employed at the periods of employment of the greatest number is shown in the following table :

INDUSTRIES.	Number of Establishments Considered	GREATEST NUMBER OF PERSONS EMPLOYED		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Number	Percentages
Boots and shoes, ...	675	55,413	57,340	+1,927	+3.48
Carpetings, ...	12	4,861	4,943	+82	+1.69
Cotton goods, ...	163	84,628	85,103	+475	+0.56
Leather, ...	126	7,535	7,634	+99	+1.31
Machines and machinery, ...	360	21,740	20,637	-1,053	-4.84
Metals and metallic goods, ...	384	15,976	16,023	+47	+0.29
Paper, ...	91	9,727	9,847	+120	+1.23
Woollen goods, ...	117	18,151	18,977	+826	+4.55
Worsted goods, ...	81	13,005	13,813	+808	+6.21
Nine industries, ...	1,959	231,036	234,367	+3,331	+1.44
Other industries, ...	2,736	127,493	129,407	+1,914	+1.50
All industries, ...	4,695	358,529	363,774	+5,245	+1.46

As indicated by the figures in the last line of this table, 358,529 persons were employed in 1896 at the periods of employment of the greatest number, and at the corresponding periods in 1897, 363,774 persons were employed, an increase of 5,245, or 1.46 per cent. But one industry, Machines and Machinery, exhibits a decrease in the greatest number of persons employed.

For the purpose of exhibiting the range of employment and unemployment year by year since 1886, as shown by these annual reports, the following table of percentages is given :

COMPARATIVE YEARS.	Number of Establishments Considered	PERCENTAGES		
		Persons Employed at Periods of Employment of Smallest Number of Persons Employed at Periods of Employment of Greatest Number	Range (Unemployed at some time During the Year)	Persons Employed at Periods of Employment of Greatest Number
1886, ...	1,027	77.33	22.67	100.00
1887, ...	1,027	78.57	21.43	100.00
1887, ...	1,140	78.72	21.28	100.00
1888, ...	1,140	77.18	22.82	100.00
1888, ...	1,364	76.64	23.36	100.00
1889, ...	1,364	79.52	20.48	100.00
1889, ...	3,041	76.67	23.33	100.00
1890, ...	3,041	78.05	21.95	100.00
1890, ...	3,745	77.91	22.09	100.00
1891, ...	3,745	78.50	21.50	100.00
1891, ...	4,473	77.52	22.48	100.00
1892, ...	4,473	76.90	23.10	100.00
1892, ...	4,397	77.66	22.34	100.00
1893, ...	4,397	64.38	35.62	100.00
1893, ...	4,093	65.17	34.83	100.00
1894, ...	4,093	66.55	33.45	100.00
1894, ...	3,629	67.11	32.89	100.00
1895, ...	3,629	74.40	25.60	100.00
1895, ...	4,609	73.58	26.42	100.00
1896, ...	4,609	66.52	33.48	100.00
1896, ...	4,695	67.32	32.68	100.00
1897, ...	4,695	71.74	28.26	100.00

In order that these percentages may have their full effect, let it be borne in mind that if no persons were out of employment at any time during the year, in the establishments making return in the different industries, the percentage of persons employed throughout the year would stand at 100; but, inasmuch as at the periods of employment of the smallest number, less persons are employed than at the periods of employment of the greatest number, the difference between the number of persons employed at these two periods may be represented by a percentage which indicates the number of persons unemployed at some time during the year, the duration of unemployment, of course, not being determined. This percentage is shown in the table in the second column of percentages.

It will be noted that from 1886 to 1892, the percentage of

persons unemployed at some time during the year did not reach one-fourth of the greatest number of persons employed, while from 1893 to 1897 the percentages of unemployment materially increased, in several instances exceeding one-third of this greatest number.

To express the same idea in a different manner, it may be said that in 1886, as shown by the 1,027 establishments compared, nearly 23 out of every 100 persons (22.67 per cent), were out of employment, so far as the establishments were concerned, at some time during the year. In 1887, the same number of establishments being compared, there were but about 21 out of every 100 persons (21.43 per cent) unemployed at some time during the year. In 1896, 4,695 establishments being compared, nearly 33 out of every 100 persons (32.68 per cent) were out of employment at some time during the year, and in 1897 only about 28 persons out of every 100 (28.26 per cent) were unemployed at some time during the year.

It must not be assumed that they were actually unemployed, for it is quite probable that a person out of employment in one industry may have obtained employment in some other industry or at some trade. The effect of employment and unemployment was made a special study in the Decennial Census of 1895, to which the reader is referred for a careful presentation of this subject made from a house-to-house canvass at that time.

The following table, brought forward from the presentation relating to persons employed, by months, pages 37 to 63, exhibits the aggregate number of persons employed in each specified month together with the average number of persons employed per month in each of the 4,695 establishments:

MONTHS.	AGGREGATE NUMBER OF PERSONS EMPLOYED IN EACH SPECIFIED MONTH		AVERAGE NUMBER OF PERSONS EMPLOYED IN EACH ESTABLISHMENT IN EACH SPECIFIED MONTH	
	1896	1897	1896	1897
January, ...	310,778	310,238	66	66
February, ...	314,681	311,515	67	66
March, ...	315,309	315,500	67	67
April, ...	314,403	320,064	67	68
May, ...	315,789	320,429	67	68
June, ...	307,346	311,678	65	66
July, ...	292,308	301,516	62	64

MONTHS.	AGGREGATE NUMBER OF PERSONS EMPLOYED IN EACH SPECIFIED MONTH		AVERAGE NUMBER OF PERSONS EMPLOYED IN EACH ESTABLISHMENT IN EACH SPECIFIED MONTH	
	1896	1897	1896	1897
August, ...	283,285	297,181	60	63
September, ...	288,034	314,955	61	67
October, ...	303,988	320,947	65	68
November, ...	306,192	320,689	65	68
December, ...	309,531	318,857	66	68

No large variation in the average number of persons employed month by month is shown in the preceding table, the average per establishment being practically the same except for the months of July, August, and September in 1896, and August in 1897.

To indicate more fully the range of unemployment, as shown by percentages, the following table for All Industries is presented :

MONTHS.	PERCENTAGES OF EMPLOYMENT DURING THE MONTHS SPECIFIED		PERCENTAGES OF UNEMPLOYMENT DURING THE MONTHS SPECIFIED	
	1896	1897	1896	1897
January, ...	98.41	96.66	1.59	3.34
February, ...	99.65	97.06	0.35	2.94
March, ...	99.85	98.30	0.15	1.70
April, ...	99.56	99.72	0.44	0.28
May, ...	100.00	99.84	-	0.16
June, ...	97.33	97.11	2.67	2.89
July, ...	92.72	93.95	7.28	6.05
August, ...	89.71	92.58	10.29	7.42
September, ...	91.21	98.18	8.79	1.87
October, ...	96.26	100.00	3.74	-
November, ...	96.96	99.92	3.04	0.08
December, ...	98.02	99.35	1.98	0.65

The number of persons employed in May, 1896 (this being the month of employment of the greatest number in that year), is considered 100 per cent; and the number of persons employed in October, 1897 (this being the month of employment of the greatest number in that year), is also considered 100 per cent. The percentages of unemployment during the other months are obtained by finding the difference between the percentages of employment appearing each month and 100 per

cent. For instance, the smallest number of persons employed in 1896 is found in the month of August; the number employed in the month of May, as has been explained, constituted 100 per cent; the number employed in the month of August is represented by 89.71 per cent, the percentage of unemployment being the difference between 89.71 and 100 per cent, or 10.29 per cent. Again, the smallest number of persons employed in any one month in 1897 is also found in August, the percentage indicating the smallest number employed being 92.58; the difference between this and 100, namely, 7.42, indicates the percentage of unemployment in that month.

The reader may find it interesting to make comparisons of like nature for the other industries shown in the presentation, pages 37 to 63.

WAGES PAID: BY INDUSTRIES.

The statistical presentations covering the payment of labor comprise three subjects and are to be found on pages 65 to 98. The first relates to the total amount of wages paid during the years 1896 and 1897, the second to the average yearly earnings of each employé, and the third to the classified weekly earnings of each person employed during the years specified.

WAGES PAID.

The statistical matter relating to the total amount of wages paid is given on pages 67 and 68. The amount paid in 1896 was \$130,339,959 and in 1897, \$132,334,075, an increase, in the aggregate, of \$1,994,116, or 1.53 per cent. The following 37 industries exhibit an increase in the total amount paid in wages in 1897 as compared with 1896:

Boots and Shoes.	Crayons, Pencils, Crucibles, etc.
Boxes, Barrels, Kegs, etc.	Drugs and Medicines.
Boxes (Paper) and Paper Goods.	Dyestuffs.
Buttons and Dress Trimmings.	Emery and Sand Paper and Cloth,
Carpetings.	etc.
Chemical Preparations (Compound- ed).	Fireworks and Matches.
Clocks, Watches, and Jewelry.	Flax, Hemp, Jute, and Linen Goods.
Clothing.	Food Preparations.
Cotton Goods.	Glass.
	Glue, Isinglass, and Starch.

Hose: Rubber, Linen, etc.
 Ink, Mucilage, and Paste.
 Ivory, Bone, Shell, and Horn Goods,
 etc.
 Leather.
 Liquors: Malt, Distilled, and Fer-
 mented.
 Mixed Textiles.
 Musical Instruments and Materials.
 Paints, Colors, and Crude Chemicals.
 Paper.
 Polishes and Dressing.

Printing, Publishing, and Bookbind-
 ing.
 Print Works, Dye Works, and Bleach-
 eries.
 Silk and Silk Goods.
 Sporting and Athletic Goods.
 Straw and Palm Leaf Goods.
 Toys and Games (Children's).
 Whips, Lashes, and Stocks.
 Woollen Goods.
 Worsted Goods.

The range of increase is from 0.59 per cent in Hose: Rub-
 ber, Linen, etc. to 31.26 per cent in Dyestuffs.

The following 40 industries show a decrease in the total
 amount paid in wages during the year 1897 as compared with
 1896:

Agricultural Implements.
 Arms and Ammunition.
 Artisans' Tools.
 Awnings, Sails, Tents, etc.
 Bicycles, Tricycles, etc.
 Brick, Tiles, and Sewer Pipe.
 Brooms, Brushes, and Mops.
 Building Materials.
 Burial Cases, Caskets, Coffins, etc.
 Carriages and Wagons.
 Cement, Kaolin, Lime, and Plaster.
 Cooking, Lighting, and Heating Ap-
 paratus.
 Cordage and Twine.
 Earthen, Plaster, and Stone Ware.
 Electrical Apparatus and Appli-
 ances.
 Electroplating.
 Fancy Articles, etc.
 Fertilizers.
 Fine Arts and Taxidermy.
 Furniture.
 Hair Work (Animal and Human).

Hosiery and Knit Goods.
 Liquors and Beverages (Not Spirit-
 uous).
 Lumber.
 Machines and Machinery.
 Metals and Metallic Goods.
 Models, Lasts, and Patterns.
 Oils and Illuminating Fluids.
 Perfumes, Toilet Articles, etc.
 Photographs and Photographic Ma-
 terials.
 Railroad Construction and Equip-
 ment.
 Rubber and Elastic Goods
 Saddlery and Harness.
 Scientific Instruments and Appli-
 ances.
 Shipbuilding.
 Stone.
 Tallow, Candles, Soap, and Grease.
 Tobacco, Snuff, and Cigars.
 Trunks and Valises.
 Wooden Goods.

The range of decrease is from 0.25 per cent in Fancy Ar-
 ticles, etc. to 18.15 per cent in Arms and Ammunition.

In the following table we bring forward the figures for the
 nine leading industries:

INDUSTRIES.	Number of Establishments Considered	TOTAL AMOUNT PAID IN WAGES DURING THE YEAR		INCREASE (+) OR DECREASE (—) IN 1897	
		1896	1897	Amounts	Percentages
Boots and shoes, ...	675	\$21,868,856	\$22,505,580	+ \$636,724	+2.91
Carpetings, ...	12	1,490,036	1,605,379	+115,343	+7.74
Cotton goods, ...	163	25,603,529	26,460,493	+856,964	+3.35
Leather, ...	126	2,851,793	3,054,684	+202,891	+7.11
Machines and machinery, ...	360	9,941,133	9,116,199	—824,934	—8.30
Metals and metallic goods, ...	384	6,920,670	6,707,323	—213,347	—3.08
Paper, ...	91	3,680,395	3,800,744	+120,349	+3.27
Woollen goods, ...	117	5,494,181	6,285,365	+791,184	+14.40
Worsted goods, ...	31	3,819,656	4,528,314	+708,658	+18.55
Nine industries, ...	1,959	81,670,249	84,064,081	+2,393,832	+2.93
Other industries, ...	2,736	48,669,710	48,269,994	—399,716	—0.70
All industries, ...	4,695	130,339,959	132,334,075	+1,994,116	+1.53

From the above table it is seen that in the nine leading industries, in the aggregate, the total amount paid in wages in 1896 was \$81,670,249 and in 1897, \$84,064,081, an increase of \$2,393,832, or 2.93 per cent. In detail, all of the nine industries, except Machines and Machinery and Metals and Metallic Goods, show an increase in 1897 over 1896, the highest being found in Worsted Goods, 18.55 per cent, and the lowest in Boots and Shoes, 2.91 per cent.

AVERAGE YEARLY EARNINGS.

The average yearly earnings in the nine leading industries are brought forward into the following table from the presentation on pages 69 and 70 :

INDUSTRIES.	Number of Establishments Considered	AVERAGE YEARLY EARNINGS		INCREASE (+) OR DECREASE (—) IN 1897	
		1896	1897	Amounts	Percentages
Boots and shoes, ...	675	\$481.41	\$470.95	—\$10.46	—2.17
Carpetings, ...	12	344.52	347.33	+2.81	+0.82
Cotton goods, ...	163	329.65	334.33	+4.68	+1.42
Leather, ...	126	474.27	476.33	+2.06	+0.43
Machines and machinery, ...	360	537.27	524.31	—12.96	—2.41
Metals and metallic goods, ...	384	504.83	492.90	—11.93	—2.36
Paper, ...	91	412.74	414.16	+1.42	+0.34
Woollen goods, ...	117	364.14	372.66	+8.52	+2.34
Worsted goods, ...	31	348.80	356.42	+7.62	+2.18
Nine industries, ...	1,959	406.92	404.72	—2.20	—0.54
Other industries, ...	2,736	464.01	454.92	—9.09	—1.96
All industries, ...	4,695	428.66	421.69	—4.97	—1.16

The averages in the preceding table are obtained by dividing the total amount of wages paid in each industry, as presented in the table on pages 67 and 68, by the aggregate average number of persons employed, without discrimination as to sex or age. Such an average is, of course, only useful in comparison with other averages similarly obtained. The final line reproduces the figures for All Industries. It will be noted that there are but slight differences in the averages shown for the two years compared for the nine leading industries, in the aggregate, and for the other industries. Boots and Shoes, Machines and Machinery, and Metals and Metallic Goods show decreases in average earnings in 1897 amounting to slightly more than two per cent.

CLASSIFIED WEEKLY EARNINGS.

Actual wage conditions in the different industries may, perhaps, be more accurately seen from the presentation of classified weekly earnings, pages 71 to 97, than from aggregate or average tables of wages. The following brings forward such a classified presentation, with percentages, for All Industries :

CLASSIFICATION OF WEEKLY EARNINGS.	PERCENTAGES			
	1896		1897	
	Males	Females	Males	Females
Under \$5, ...	38.19	61.81	39.04	60.96
\$5 but under \$6, ...	37.03	62.97	37.29	62.71
\$6 but under \$7, ...	48.54	51.46	47.79	52.21
\$7 but under \$8, ...	57.83	42.17	57.82	42.18
\$8 but under \$9, ...	66.59	33.41	65.07	34.93
\$9 but under \$10, ...	81.11	18.89	81.45	18.55
\$10 but under \$12, ...	86.79	13.21	86.88	13.12
\$12 but under \$15, ...	94.14	5.86	94.03	5.97
\$15 but under \$20, ...	97.25	2.75	97.58	2.47
\$20 and over, ...	98.30	1.70	98.46	1.54
TOTALS, ...	66.86	33.14	66.42	33.58

This table indicates that of every 100 employes returned in All Industries as receiving less than \$5 per week, about 38 (38.19 per cent) were males in 1896 and about 39 (39.04 per cent) in 1897. The proportion of females in this class was 61.81 per cent in 1896 and 60.96 per cent in 1897. The proportion of males in each class increases after the \$5 but under

\$6 limit is passed while the proportion of females correspondingly declines.

The fluctuations in the different classes are shown for All Industries in the following table :

CLASSIFICATION OF WEEKLY EARNINGS.	PERCENTAGES					
	1896			1897		
	Males	Females	Totals	Males	Females	Totals
Under \$5, ...	8.11	26.48	14.20	8.58	26.51	14.00
\$5 but under \$6, ...	5.54	19.01	10.00	5.73	19.06	10.21
\$6 but under \$7, ...	8.59	18.38	11.84	8.69	18.77	12.07
\$7 but under \$8, ...	9.87	13.78	10.88	9.39	13.55	10.78
\$8 but under \$9, ...	9.30	9.41	9.34	9.05	9.62	9.25
\$9 but under \$10, ...	12.15	5.71	10.01	12.08	5.44	9.85
\$10 but under \$12, ...	14.02	4.31	10.80	14.21	4.25	10.86
\$12 but under \$15, ...	16.45	2.07	11.68	16.59	2.08	11.72
\$15 but under \$20, ...	12.44	0.71	8.56	11.93	0.60	8.13
\$20 and over, ...	4.03	0.14	2.74	3.75	0.12	2.58
TOTALS, ...	100.00	100.00	100.00	100.00	100.00	100.00

In this table, the total number of males, the total number of females, and the total number of employes of both sexes are each considered as representing 100 per cent, and the number of employes in each class constitute parts of this aggregate, or, in other words, are represented by percentages which totalize to 100. That class in which the proportion of the sexes is about the same in each year is the class receiving \$8 but under \$9 per week. The percentages of males in this class in 1896 and 1897 were 9.30 and 9.05, respectively, and of females, 9.41 and 9.62, respectively. The percentages of males and females do not materially vary in either year.

PROPORTION OF BUSINESS DONE AND DAYS IN OPERATION: BY INDUSTRIES.

The statistical matter relating to this subject will be found on pages 99 to 104.

PROPORTION OF BUSINESS DONE.

In computing the proportion of business done, maximum production, that is to say, the greatest amount of goods that

can be turned out with the present facilities, is considered 100 per cent. In the 4,695 establishments making return in each year, the average proportion of business done in 1896 is represented by 59.99 per cent and in 1897 by 59.72 per cent.

The following table reproduces the average proportion of business done for the nine leading industries, other industries, and All Industries :

INDUSTRIES.	Number of Establishments Considered	AVERAGE PROPORTION OF BUSINESS DONE		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Proportion	Percentages
Boots and shoes, ...	675	60.40	59.78	-0.62	-1.03
Carpetings, ...	12	68.83	67.83	-1.50	-2.18
Cotton goods, ...	163	79.52	81.90	+2.38	+2.99
Leather, ...	126	61.06	60.98	-0.13	-0.21
Machines and machinery, ...	360	57.54	54.26	-3.28	-5.70
Metals and metallic goods, ...	384	59.26	57.54	-1.72	-2.90
Paper, ...	91	73.81	75.32	+1.51	+2.05
Woollen goods, ...	117	70.30	78.68	+8.28	+11.78
Worsted goods, ...	31	68.90	84.94	+16.04	+23.28
Nine industries, ...	1,959	62.68	62.53	-0.15	-0.24
Other industries, ...	2,736	58.06	57.71	-0.35	-0.60
All industries, ...	4,695	59.99	59.72	-0.27	-0.45

It will be noted from an examination of the above table that production in the nine leading industries ranged from about one-half to nearly eight-tenths in 1896 and from about one-half to a trifle over eight-tenths in 1897, and in comparison with 1896, five out of the nine leading industries show a decline in the average proportion of business done.

DAYS IN OPERATION.

The statistical presentation relating to this division of the subject will be found on pages 102 and 103. The average number of days in operation for All Industries, in the aggregate, in 1896 was 281.03, and in 1897, 283.33, an increase of 2.30 days or 0.82 per cent.

In the following table we bring forward the facts for the nine leading industries, other industries, and All Industries :

INDUSTRIES.	Number of Estab- lishments Con- sidered	AVERAGE NUMBER OF DAYS IN OPERATION		INCREASE (+) OR DECREASE (-) IN 1897	
		1896	1897	Days	Percent- ages
Boots and shoes, ...	675	284.66	284.74	+0.08	+0.03
Carpetings, ...	12	244.64	243.77	-0.87	-0.36
Cotton goods, ...	163	279.92	285.15	+5.23	+1.87
Leather, ...	128	288.06	292.15	+4.10	+1.42
Machines and machinery, ...	360	292.85	275.70	-17.15	-5.86
Metals and metallic goods, ...	384	279.65	277.54	-2.11	-0.75
Paper, ...	91	267.80	272.49	+4.69	+1.75
Woollen goods, ...	117	264.69	282.90	+18.21	+6.88
Worsted goods, ...	31	285.44	294.43	+8.99	+3.15
Nine industries, ...	1,959	280.27	282.89	+2.62	+0.93
Other industries, ...	2,736	282.48	284.19	+1.71	+0.61
All industries, ...	4,695	281.03	283.33	+2.30	+0.82

It will be noted that, with the exception of Carpetings, Machines and Machinery, and Metals and Metallic Goods, each of these nine industries exhibits an increase in the average number of days in operation in 1897 as compared with 1896, Woollen Goods leading, with a gain of 18.21 days or 6.88 per cent.

The total number of working days in 1897, exclusive of 52 Sundays and 7 holidays, was 306. The average number of working days in a month was, therefore, 25.50. In two of the industries a loss of more than one month but less than two months, on an average, in 1897 as compared with 1896 is shown, they are, Arms and Ammunition and Hair Work (Animal and Human).

Three industries, Buttons and Dress Trimmings; Dyestuffs; and Mixed Textiles, show a gain of more than one month but less than two months, on an average, in 1897 as compared with 1896.

SUMMARY.

The tables which follow bring before the reader the leading factors relative to the condition of the various industries in 1896 and 1897. For convenience in reviewing, the 77 industries are separated into classes. The first class comprises those industries which show an increase in the average number of days in operation and in the average proportion of business done in 1897 as compared with 1896; the second class, those

industries which show an increase in the average number of days in operation but a decrease in the average proportion of business done; the third class, those industries which show a decrease in the average number of days in operation but a greater average proportion of business done; and the fourth and last class, those industries which show a decrease both in the average number of days in operation and in the average proportion of business done. There is also shown the average yearly earnings received by each employé, without regard to sex or age, in the industries contained in each class, with the average number of persons employed and the "range" or difference between the number of persons employed at the periods of employment of the smallest number and the number of persons employed at the periods of employment of the greatest number.

In the analysis of these classes, the increases or decreases in the proportion of business done are based upon the total productive capacity of the establishments and not upon the aggregate value of goods manufactured in 1897.

The table relating to the first class follows:

INDUSTRIES.	INCREASE (+) OR DECREASE (-) IN 1897 AS COMPARED WITH 1896 IN —				
	Average Number of Days in Operation	Average Proportion of Business Done	Average Yearly Earnings	Average Number of Persons Employed	"Range"
Artisans' tools, ...	+0.91	+2.88	-\$47.68	+42	-167
Boxes, barrels, kegs, etc., ...	+1.53	+0.16	+1.81	+55	+154
Boxes (paper) and paper goods, . .	+0.62	+1.36	+6.29	+117	+266
Buttons and dress trimmings, . . .	+34.49	+9.85	+7.05	+128	+88
Chemical preparations (compounded), .	+3.63	+3.08	-16.42	+54	-6
Clocks, watches, and jewelry, . . .	+13.22	+2.80	+6.07	+283	-18
Clothing, ...	+7.16	+2.56	+2.58	+598	+363
Cotton goods, ...	+5.23	+2.88	+4.68	+1,475	-3,076
Crayons, pencils, crucibles, etc., .	+1.81	+16.66	-67.11	+13	+19
Dyestuffs, ...	+35.79	+9.16	+5.10	+29	+2
Electroplating, ...	+14.38	+0.58	-17.18	-4	+11
Emery and sand paper and cloth, etc., .	+0.94	+7.78	+27.36	+2	-45
Fancy articles, etc., ...	+0.88	+7.90	-13.10	+13	+57
Glass, ...	+19.32	+8.98	+20.71	+6	-52
Ivory, bone, shell, and horn goods, etc., .	+11.84	+5.06	+12.71	+48	-47
Liquors and beverages (not spirituous), .	+0.27	+0.75	+25.15	-28	-1
Mixed textiles, ...	+39.51	+6.33	-1.51	+159	+24
Musical instruments and materials, . .	+3.08	+0.05	-25.81	+254	+77
Paper, ...	+4.69	+1.51	+1.42	+280	-511
Printing, publishing, and bookbinding, .	+2.37	+5.89	-4.76	+49	+288

INDUSTRIES.	INCREASE (+) OR DECREASE (—) IN 1897 AS COMPARED WITH 1896 IN —				"Range"
	Average Number of Days in Operation	Average Proportion of Busi- ness Done	Average Yearly Earnings	Average Number of Persons Employed	
Print works, dye works, and bleacheries,	+12.31	+1.61	—\$8.88	+324	—156
Saddlery and harness, ...	+5.41	+0.50	—6.55	—5	+3
Silk and silk goods, ...	+24.63	+16.67	+4.79	+143	—313
Straw and palm leaf goods, ...	+2.43	+0.62	+0.14	+151	+307
Trunks and valises, ...	+1.45	+4.14	+2.08	—4	—23
Whips, lashes, and stocks, ...	+11.17	+6.64	—4.31	+20	—47
Woollen goods, ...	+18.21	+8.28	+8.52	+1,178	—1,634
Worsted goods, ...	+8.90	+16.04	+7.62	+1,754	—4,302

The industries which are grouped in this table are those which show an increase in the average number of days in operation and also in the average proportion of business done. Eleven of these industries show a decrease in average yearly earnings, namely,

Artisans' Tools.

Chemical Preparations (Compound-
ed).

Crayons, Pencils, Crucibles, etc.

Electroplating.

Fancy Articles, etc.

Mixed Textiles.

Musical Instruments and Materials.

Printing, Publishing, and Bookbind-
ing.

Print Works, Dye Works, and Bleach-
eries.

Saddlery and Harness.

Whips, Lashes, and Stocks.

A decrease in average number of persons employed is shown for

Electroplating.

Liquors and Beverages (Not Spirit-
uous).

Saddlery and Harness.

Trunks and Valises.

The difference in the range of employment is greater in 1897 than in 1896 in

Boxes, Barrels, Kegs, etc.

Boxes (Paper) and Paper Goods.

Buttons and Dress Trimmings.

Clothing.

Crayons, Pencils, Crucibles, etc.

Dyestuffs.

Electroplating.

Fancy Articles, etc.

Mixed Textiles.

Musical Instruments and Materials.

Printing, Publishing, and Bookbind-
ing.

Saddlery and Harness.

Straw and Palm Leaf Goods.

Industries of the second class are grouped in the following table :

INDUSTRIES.	INCREASE (+) OR DECREASE (—) IN 1897 AS COMPARED WITH 1896 IN —				
	Average Number of Days in Operation	Average Proportion of Business Done	Average Yearly Earnings	Average Number of Persons Employed	"Range"
Awninge, sails, tents, etc., ...	+3.88	—2.66	—\$19.98	—3	+22
Boots and shoes, ...	+0.08	—0.62	—10.46	+2,361	—1,777
Brooms, brushes, and mops, ...	+13.03	—4.14	—21.11	—3	—91
Building materials, ...	+1.26	—4.86	—0.19	—52	+3
Carriages and wagons, ...	+3.24	—2.67	—7.59	—98	—50
Drugs and medicines, ...	+0.62	—2.17	+1.95	+24	+114
Electrical apparatus and appliances, .	+1.46	—2.30	—33.16	+110	+113
Flax, hemp, jute, and linen goods, .	+21.96	—0.63	+18.24	—4	—8
Glue, isinglass, and starch, ...	+5.56	—1.25	+33.47	—1	—38
Ink, mucilage, and paste, ...	+0.03	—5.63	—22.08	+4	*=
Leather, ...	+4.10	—0.13	+2.06	+400	—366
Liquors: malt, distilled, and fermented, .	+4.61	—3.59	+13.14	+80	—64
Models, lasts, and patterns, ...	+2.91	—7.32	—26.14	—8	+11
Perfumes, toilet articles, etc., ...	+12.12	—10.20	+37.47	—4	+3
Photographs and photographic materials,	+6.09	—5.04	—24.97	—26	—15
Polishes and dressing, ...	+3.81	—0.28	—15.42	+28	+45
Shipbuilding, ...	+2.36	—3.45	—25.21	—98	—79
Tobacco, snuff, and cigars, ...	+0.22	—1.26	+1.14	—38	—95
Toys and games (children's), ...	+4.25	—0.22	+1.58	+32	+3
Wooden goods, ...	+3.20	—1.71	—24.67	—11	—12

* No change.

The above industries are those which show an increase in the average number of days in operation and a decrease in the average proportion of business done. Of these industries, the following show an increase in average yearly earnings :

Drugs and Medicines.	Perfumes, Toilet Articles, etc.
Flax, Hemp, Jute, and Linen Goods.	Tobacco, Snuff, and Cigars.
Glue, Isinglass, and Starch.	Toys and Games (Children's).
Leather.	
Liquors: Malt, Distilled, and Fermented.	

An increase in the average number of persons employed is shown for

Boots and Shoes.	Leather.
Drugs and Medicines.	Liquors: Malt, Distilled, and Fermented.
Electrical Apparatus and Appliances.	Polishes and Dressing.
Ink, Mucilage, and Paste.	Toys and Games (Children's).

The range of unemployment was wider in 1897 and in 1896 in the following industries :

Awnings, Sails, Tents, etc.

Building Materials.

Drugs and Medicines.

Electrical Apparatus and Appliances.

Models, Lasts, and Patterns.

Perfumes, Toilet Articles, etc.

Polishes and Dressing.

Toys and Games (Children's).

Industries of the third class are presented in the following table :

INDUSTRIES.	INCREASE (+) OR DECREASE (—) IN 1897 AS COMPARED WITH 1896 IN —				
	Average Number of Days in Operation	Average Proportion of Business Done	Average Yearly Earnings	Average Number of Persons Employed	"Range"
Furniture, ...	—0.82	+0.57	—\$8.88	+69	+48
Hair work (animal and human), . . .	—30.33	+2.00	—31.88	+2	—1
Hose: rubber, linen, etc., ...	—1.95	+1.40	+39.65	—63	—70
Hosiery and knit goods, ...	—2.08	+1.32	—0.41	—221	—297
Lumber, ...	—1.00	+2.00	—3.90	*=	—5
Oils and illuminating fluids, ...	—0.38	+0.63	—31.92	+4	+10
Rubber and elastic goods, ...	—9.04	+3.60	—23.03	—291	—1,599

* No change.

The industries shown in the above table are those in which a decrease in the average number of days in operation but a greater average proportion of business done appears. With the exception of Hose: Rubber, Linen, etc. a decrease is shown in average yearly earnings in each of the industries in 1897 as compared with 1896. An increase in the average number of persons employed is shown for all the industries in this class except, Hose: Rubber, Linen, etc.; Hosiery and Knit Goods; Rubber and Elastic Goods; and Lumber, in the last named industry there was no change in the average number of persons employed. The range of unemployment was narrower in all except two industries, namely, Furniture and Oils and Illuminating Fluids.

The final table presents the industries of the fourth class.

INDUSTRIES.	INCREASE (+) OR DECREASE (-) IN 1897 AS COMPARED WITH 1896 IN —				
	Average Number of Days in Operation	Average Proportion of Busi- ness Done	Average Yearly Earnings	Average Number of Persons Employed	"Range"
Agricultural implements, ...	-2.16	-5.22	-\$10.32	-16	-66
Arms and ammunition, ...	-29.49	-1.59	-60.53	-109	+159
Bicycles, tricycles, etc., ...	-5.87	-11.43	-15.69	-205	-67
Brick, tiles, and sewer pipe, ...	-7.50	-3.40	-13.22	-59	+33
Burial cases, caskets, coffins, etc., ...	-0.50	-6.37	-7.09	-2	+7
Carpetings, ...	-0.87	-1.50	+2.81	+297	-623
Cement, kaolin, lime, and plaster, ...	-3.38	-5.11	+5.94	-3	-11
Cooking, lighting, and heating apparatus, ...	-5.47	-2.41	-15.91	-1	+126
Cordage and twine, ...	-17.91	-2.85	-15.27	-103	-342
Earthen, plaster, and stone ware, ...	-19.36	-5.71	-30.93	-7	+3
Fine arts and taxidermy, ...	-0.04	-3.33	+46.21	-2	+1
Fireworks and matches, ...	-25.28	-9.25	+3.20	+3	+29
Food preparations, ...	-0.43	-0.92	-8.92	+412	+399
Machines and machinery, ...	-17.15	-3.28	-12.06	-1,116	-572
Metals and metallic goods, ...	-2.11	-1.72	-11.93	-101	+151
Paints, colors, and crude chemicals, ...	-3.24	-3.48	-8.38	+9	+13
Railroad construction and equipment, ...	-4.14	-3.60	-7.35	-191	-431
Scientific instruments and appliances, ...	-4.91	-2.45	-17.94	+14	+92
Sporting and athletic goods, ...	-8.68	-5.80	+13.27	+1	-63
Stone, ...	-0.85	-2.07	+2.70	-361	-123
Tallow, candles, soap, and grease, ...	-2.66	-1.00	-6.61	-42	-42

The industries grouped in the above table show a decrease both in average number of days in operation and in average proportion of business done. A decrease in average yearly earnings is shown for all the industries in this class except Carpetings; Cement, Kaolin, Lime, and Plaster; Fine Arts and Taxidermy; Fireworks and Matches; Sporting and Athletic Goods; and Stone.

A decrease in the average number of persons employed is shown for all the industries in the above table, except Carpetings; Fireworks and Matches; Food Preparations; Paints, Colors, and Crude Chemicals; Scientific Instruments and Appliances; and Sporting and Athletic Goods.

The range of unemployment was wider in 1897 as compared with 1896 in the following industries:

Arms and Ammunition.
Brick, Tiles, and Sewer Pipe.
Burial Cases, Caskets, Coffins, etc.

Cooking, Lighting, and Heating
Apparatus.
Earthen, Plaster, and Stone Ware.

Fine Arts and Taxidermy.
 Fireworks and Matches.
 Food Preparations.
 Metals and Metallic Goods.

Paints, Colors, and Crude Chemicals.
 Scientific Instruments and Appli-
 ances.

In Fertilizers, no change in the average number of days in operation is shown, together with a decrease in average proportion of business done, average yearly earnings, average number of persons employed, and a wider range of unemployment in 1897 as compared with 1896.

In the next table is given a graphic portrayal of the condition in each industry in 1897 as compared with 1896, with respect to the amount of capital invested, value of goods made and work done, amount paid in wages during the year, and the average number of persons employed. An increase in any of the items is indicated by the sign (+), a decrease by the sign (—), and no change by the sign (=).

INDUSTRIES.	INCREASE (+), DECREASE (—), OR NO CHANGE (=), IN 1897 AS COMPARED WITH 1896 IN—			
	Amount of Capital Invested	Value of Goods Made and Work Done	Total Amount Paid in Wages	Average Number of Persons Employed
Agricultural implements, ...	—	—	—	—
Arms and ammunition, ...	+	+	—	—
Artisans' tools, ...	+	—	—	+
Awnings, sails, tents, etc., ...	—	—	—	—
Bicycles, tricycles, etc., ...	+	—	—	—
Boots and shoes, ...	+	+	+	+
Boxes, barrels, kegs, etc., ...	+	+	+	+
Boxes (paper) and paper goods, ...	—	+	+	+
Brick, tiles, and sewer pipe, ...	+	—	—	—
Brooms, brushes, and mops, ...	—	—	—	—
Building materials, ...	—	—	—	—
Burial cases, caskets, coffins, etc., ...	+	—	—	—
Buttons and dress trimmings, ...	+	+	+	+
Carpetings, ...	+	+	+	+
Carriages and wagons, ...	—	—	—	—
Cement, kaolin, lime, and plaster, ...	—	—	—	—
Chemical preparations (compounded), ...	—	+	+	+
Clocks, watches, and jewelry, ...	+	+	+	+
Clothing, ...	+	+	+	+
Cooking, lighting, and heating apparatus, ...	+	+	—	—
Cordage and twine, ...	+	—	—	—
Cotton goods, ...	—	—	+	+
Crayons, pencils, crucibles, etc., ...	+	+	+	+
Drugs and medicines, ...	—	+	+	+
Dyestuffs, ...	+	+	+	+
Earthen, plaster, and stone ware, ...	+	—	—	—
Electrical apparatus and appliances, ...	+	+	—	+
Electroplating, ...	+	—	—	—

INDUSTRIES.	INCREASE (+), DECREASE (-), OR NO CHANGE (=) IN 1907 AS COMPARED WITH 1896 IN -			
	Amount of Capital Invested	Value of Goods Made and Work Done	Total Amount Paid in Wages	Average Number of Persons Employed
Emery and sand paper and cloth, etc., ...	-	+	+	+
Fancy articles, etc., ...	+	+	-	+
Fertilizers, ...	+	-	-	-
Fine arts and taxidermy, ...	-	-	-	-
Fireworks and matches, ...	+	+	+	+
Flax, hemp, jute, and linen goods, ...	-	+	+	-
Food preparations, ...	-	+	+	+
Furniture, ...	+	+	-	+
Glass, ...	+	+	+	+
Glue, isinglass, and starch, ...	-	+	+	-
Hair work (animal and human), ...	+	-	-	+
Hose: rubber, linen, etc., ...	+	-	+	-
Hosiery and knit goods, ...	+	-	-	-
Ink, muclage, and paste, ...	-	+	+	+
Ivory, bone, shell, and horn goods, etc., ...	+	+	+	+
Leather, ...	+	+	+	+
Liquors and beverages (not spirituous), ...	-	-	-	-
Liquors: malt, distilled, and fermented, ...	+	+	+	+
Lumber, ...	+	+	-	=
Machines and machinery, ...	+	-	-	-
Metals and metallic goods, ...	+	-	-	-
Mixed textiles, ...	+	+	+	+
Models, lasts, and patterns, ...	+	-	-	-
Musical instruments and materials, ...	-	+	+	+
Oils and illuminating fluids, ...	-	-	-	+
Paints, colors, and crude chemicals, ...	+	+	+	+
Paper, ...	+	+	+	+
Perfumes, toilet articles, etc., ...	-	-	-	-
Photographs and photographic materials, ...	-	+	+	+
Polishes and dressing, ...	-	+	+	+
Printing, publishing, and bookbinding, ...	-	-	+	+
Print works, dye works, and bleacheries, ...	-	+	+	+
Railroad construction and equipment, ...	-	-	-	-
Rubber and elastic goods, ...	+	-	-	-
Saddlery and harness, ...	-	+	-	-
Scientific instruments and appliances, ...	+	+	-	+
Shipbuilding, ...	+	+	-	-
Silk and silk goods, ...	+	+	+	+
Sporting and athletic goods, ...	-	+	+	+
Stone, ...	-	-	-	-
Straw and palm leaf goods, ...	-	-	+	+
Tallow, candles, soap, and grease, ...	+	-	-	-
Tobacco, snuff, and cigars, ...	+	-	-	-
Toys and games (children's), ...	+	+	+	+
Trunks and valises, ...	-	-	-	-
Whips, lashes, and stocks, ...	-	+	+	+
Wooden goods, ...	+	-	-	-
Woollen goods, ...	+	+	+	+
Worsted goods, ...	+	+	+	+
ALL INDUSTRIES, ...	+	+	+	+

All Industries, in the aggregate, show an increased amount of capital invested, an increased product value, a larger amount disbursed in wages, and a larger average number of persons employed. The same statement applies to the following industries, 20 in number :

Boots and Shoes.	Leather.
Boxes, Barrels, Kegs, etc.	Liquors: Malt, Distilled, and Fermented.
Buttons and Dress Trimmings.	Mixed Textiles.
Carpetings.	Paints, Colors, and Crude Chemicals
Clocks, Watches, and Jewelry.	Paper.
Clothing.	Silk and Silk Goods.
Crayons, Pencils, Crucibles, etc.	Toys and Games (Children's).
Dyestuffs.	Woollen Goods.
Fireworks and Matches.	Worsted Goods.
Glass.	
Ivory, Bone, Shell, and Horn Goods, etc.	

The following 12 industries show a decreased amount of capital invested, value of goods made and work done, amount paid in wages, and average number of persons employed :

Agricultural Implements.	Liquors and Beverages (Not Spirituous).
Awnings, Sails, Tents, etc.	Perfumes, Toilet Articles, etc.
Brooms, Brushes, and Mops.	Railroad Construction and Equipment.
Building Materials.	Stone.
Carriages and Wagons.	Trunks and Valises.
Cement, Kaolin, Lime, and Plaster.	
Fine Arts and Taxidermy.	

An increased amount of capital invested, but a decrease in value of goods made, amount paid in wages, and average number of persons employed, is shown for the following 16 industries :

Bicycles Tricycles, etc.	Machines and Machinery.
Brick, Tiles, and Sewer Pipe.	Metals and Metallic Goods.
Burial Cases, Caskets, Coffins, etc.	Models, Lasts, and Patterns.
Cordage and Twine.	Rubber and Elastic Goods
Earthen, Plaster, and Stone Ware.	Shipbuilding
Electroplating	Tallow, Candles, Soap, and Grease.
Fertilizers.	Tobacco, Snuff, and Cigars.
Hosiery and Knit Goods.	Wooden Goods.

The following 11 industries show a decrease in capital invested but an increase in each of the other items :

Boxes (Paper) and Paper Goods.	Ink, Mucilage, and Paste.
Chemical Preparations (Compound- ed).	Musical Instruments and Materials.
Drugs and Medicines.	Polishes and Dressing
Emery and Sand Paper and Cloth, etc.	Print Works, Dye Works, and Bleach- eries.
Food Preparations.	Sporting and Athletic Goods.
	Whips, Lashes, and Stocks.

An increase in capital and product with a decrease in wages and persons employed is shown for Arms and Ammunition and Cooking, Lighting, and Heating Apparatus. The same facts obtain for Lumber, with the exception that there is no change in the average number of persons employed. A decrease in capital and product with an increase in wages and persons employed is shown for Cotton Goods; Printing, Publishing, and Bookbinding; and Straw and Palm Leaf Goods. An increase in capital invested and average number of persons employed with a decreased product value and amount paid in wages is shown for Artisans' Tools and Hair Work (Animal and Human).

A decreased capital, larger product, increased amount paid in wages, and a smaller average number of persons employed is shown for Flax, Hemp, Jute, and Linen Goods and Glue, Isinglass, and Starch; while an increased capital, larger product, decreased wages, and greater average number of persons employed is shown for Electrical Apparatus and Appliances; Fancy Articles, etc.; Furniture; and Scientific Instruments and Appliances. An increase in capital and amount of wages paid with a decrease in product and average number of persons employed is shown for Hose: Rubber, Linen, etc. while an increase in product value but a decrease in each of the other items is shown for Photographs and Photographic Materials and Saddlery and Harness. Oils and Illuminating Fluids shows a decrease in each of the items except average number of persons employed.

The following table reproduces the leading facts relative to All Industries from the presentation on pages 145 to 147 :

CLASSIFICATION.	1896	1897	INCREASE (+) OR DECREASE (-) IN 1897	
			Amounts	Percent- ages
Number of private firms, ...	3,566	3,522	-84	-0.96
Number of corporations, ...	1,091	1,124	+33	+3.02
Number of partners, ...	5,659	5,529	-130	-2.30
Number of stockholders, ...	42,452	43,634	+1,182	+2.78
Amount of capital invested, . . .	\$380,799,877	\$394,371,391	+\$13,571,514	+3.56
Value of stock used, ...	\$317,241,327	\$330,154,301	+\$12,912,974	+4.07
Value of goods made and work done, .	\$559,880,511	\$576,877,064	+\$16,996,553	+3.04
Persons employed:				
Average number, ...	305,492	313,816	+8,324	+2.72
Smallest number, ...	241,363	260,970	+19,607	+8.12
Greatest number, ...	358,529	363,774	+5,245	+1.46
Excess of greatest over smallest number, ...	117,166	102,804	-14,362	-12.26
Total amount paid in wages, . . .	\$130,339,959	\$132,334,075	+\$1,994,116	+1.53
Average yearly earnings, ...	\$426.66	\$421.69	-\$4.97	-1.16
Average proportion of business done, .	59.99	59.72	-0.27	-0.45
Average number of days in operation, .	281.03	283.33	+2.30	+0.82

The changes in each of the elements summarized in the foregoing table, when reduced to the basis of percentages, are at once apparent. These changes, of course, indicate that the condition of the industries, in the aggregate, was somewhat better in 1897 than in the previous year. The increase in the number of corporations, it should be borne in mind, is due

	INDUSTRIES.	Number of Estab- lishments Con- sidered	Amount of Capital Invested	Average Number of Persons Employed
1	Boots and shoes, ...	675	\$23,014,435	47,788
2	Carpetings, ...	12	6,784,921	4,622
3	Cotton goods, ...	163	110,655,603	79,144
4	Leather, ...	126	7,559,363	6,413
5	Machines and machinery, ...	360	27,574,500	17,387
6	Metals and metallic goods, ...	384	18,308,737	13,603
7	Paper, ...	91	20,989,176	9,177
8	Woollen goods, ...	117	25,390,647	16,866
9	Worsted goods, ...	31	16,397,790	12,705

[NOTE. It is proper to explain certain designations used in the above table. By "Industry value created above the value of stock and materials consumed. The values presented in this from the total value of goods made and work done in each of the specified industries, the value division of the proceeds of each industry, one part of this industry product is paid to the labor fund from which are paid freights, insurance, interest on loans (credit capital), interest on stock those for stock and wages. The remainder, if any, is the profit of the employer. The entire becomes a "Profit and Minor Expense Fund," and is thus designated in the table. Of course, we have enumerated, paid out of this balance, are in themselves considerable in amount, and for materials (stock), and wages.]

to changes from a private firm to a corporate basis on the part of establishments making return in each year. The same cause accounts for the percentages of decrease in the number of private firms.

These returns are rendered by identical establishments in each year, and in the 4,695 considered in this volume, capital increased 3.56 per cent, value of stock used increased 4.07 per cent, and the value of goods made and work done increased 3.04 per cent.

The average number of persons employed exhibits an increase of 2.72 per cent, and the total amount paid in wages shows an increase of 1.53 per cent. The range of unemployment was narrower in 1897 than in 1896. A decrease is shown in average yearly earnings, while the average proportion of business done, based upon the full productive capacity of the establishments, was 0.27 per cent less in 1897 than in 1896. Each of the employes worked 2.30 days more in 1897 than in 1896.

The next table presents, for the year 1897, the actual product for \$1,000 of capital invested in each of the nine leading industries, with the average product per employe, the percentages of industry product paid in wages, and the percentages devoted to other expenses:

Total Amount Paid in Wages During the Year	Industry Product	Profit and Minor Expense Fund	INDUSTRY PRODUCT		PERCENTAGE OF INDUSTRY PRODUCT		
			Per \$1,000 of Capital	Average per Employé	Devoted to Profit and Minor Expenses	Paid in Wages	
\$22,505,580	\$38,761,196	\$16,255,616	\$1,684.21	\$811.11	41.94	58.06	1
1,605,379	2,466,305	860,926	363.50	533.60	34.91	65.09	2
26,460,493	36,426,626	9,966,133	329.19	460.26	27.36	72.64	3
3,054,684	5,642,012	2,587,328	746.36	379.78	45.86	54.14	4
9,116,199	16,180,943	7,064,744	586.81	1,039.76	43.66	56.34	5
6,707,323	12,213,324	5,511,001	667.35	897.88	45.10	54.90	6
3,800,744	8,545,758	4,745,014	407.15	931.21	55.52	44.48	7
6,235,365	10,563,025	4,277,660	416.02	626.29	40.50	59.50	8
4,528,314	9,434,920	4,906,606	575.38	742.61	52.00	48.00	9

Product" is meant the actual result of the productive forces in the industry, that is, the added and the following tables under the designation "Industry Product," are obtained by deducting of stock used, the difference being added value or actual product due to the industry. In the force in the form of wages, this being labor's share of the product. The balance constitutes a (fixed or invested capital), rents, commissions, salaries, etc.; in fact, all expenses other than balance of the industry product remaining after the deduction of the amount paid in wages, it will be understood that the term "Minor Expense" is relative. The expenses, some of which are only to be classed as "Minor" in comparison with the generally larger amounts expended

The note presented with this table explains certain designations used in it. The largest product per \$1,000 of capital invested is found in Boots and Shoes, namely, \$1,684.21. No other industry approaches this figure. The nearest to it, however, is Leather, the industry product being \$746.36. Following this industry ranks Metals and Metallic Goods in which the industry product is \$667.35. Next come Machines and Machinery and Worsted Goods in which the industry products are \$586.81 and \$575.38, respectively. Woollen Goods and Paper follow, with an industry product per \$1,000 of capital of \$416.02 and \$407.15, respectively, and are in turn followed by Carpetings and Cotton Goods with industry products of \$363.50 and \$329.19, respectively, Cotton Goods ranking lowest among the industries in the selected list.

These figures afford an indication of the efficiency of the capital invested in these industries during 1897, and those which present the average industry product per employé may be considered as indicating the efficiency of labor. With respect to this point Machines and Machinery leads the other industries, the average product per employé being \$1,039.76. Not far below it is Paper, in which an average of \$931.21 appears; Metals and Metallic Goods, in which an average of \$897.88 is shown; Leather, in which an average of \$879.78 is noted; and Boots and Shoes, in which an average of \$811.11 appears. Following in the order named, with averages as specified, are Worsted Goods, \$742.61; Woollen Goods, \$626.29; Carpetings, \$533.60; and Cotton Goods, \$460.26.

When the percentage of industry product paid in wages is considered, we find that Cotton Goods leads, the percentage being 72.64. Next ranks Carpetings, the percentage being 65.09, followed in turn by Woollen Goods, Boots and Shoes, Machines and Machinery, Metals and Metallic Goods, Leather, and Worsted Goods, in which the percentages are 59.50, 58.06, 56.34, 54.90, 54.14, and 48, respectively. In Paper, ranking lowest in this comparison, the percentage is 44.48. These percentages of industry product paid in wages are the complements of the percentages of industry product devoted to profit and minor expenses, these two items aggregating 100 per cent, or the whole of the industry product.

In the following presentation, the rank of the different industries in 1897, as regards the amount of industry product per \$1,000 of capital, is compared with the rank of the same industries for 1896, as derived from the report on Annual Statistics of Manufactures for that year :

1896.	1897.
Boots and Shoes.	Boots and Shoes.
Leather.	Leather.
Machines and Machinery.	Metals and Metallic Goods.
Metals and Metallic Goods.	Machines and Machinery.
Worsted Goods.	Worsted Goods.
Woollen Goods.	Woollen Goods.
Paper.	Paper.
Carpetings.	Carpetings.
Cotton Goods.	Cotton Goods.

In the above comparison all the industries retain the rank in 1897 which was held in 1896, with the exceptions of Machines and Machinery and Metals and Metallic Goods, the former ranking third in 1896 and fourth in 1897, and the latter industry ranking fourth in 1896 and third in 1897.

With respect to the average industry product per employé, the rank of the industries in each of the years appears as follows :

1896.	1897.
Machines and Machinery.	Machines and Machinery.
Leather.	Paper
Metals and Metallic Goods.	Metals and Metallic Goods.
Paper.	Leather
Boots and Shoes.	Boots and Shoes.
Worsted Goods.	Worsted Goods.
Woollen Goods.	Woollen Goods.
Carpetings.	Carpetings.
Cotton Goods.	Cotton Goods.

From the above table it is seen that with the exceptions of Leather and Paper all of the selected industries retained the same rank in 1897 which they held in 1896. Leather which ranked second in 1896 fell to fourth place in 1897 and Paper rose from fourth place in 1896 to second in 1897.

The next comparison relates to the percentage of industry product paid in wages, the industries ranking as follows :

1896.	1897.
Cotton Goods.	Cotton Goods.
Boots and Shoes.	Carpetings.
Carpetings.	Woollen Goods.
Woollen Goods.	Boots and Shoes.
Metals and Metallic Goods.	Machines and Machinery.
Worsted Goods.	Metals and Metallic Goods.
Machines and Machinery.	Leather.
Leather.	Worsted Goods.
Paper.	Paper.

In this comparison there is seen to be more changes in rank than in the other two, Cotton Goods and Paper being the only industries which retain the rank in 1897 which was held in 1896. Boots and Shoes, which ranked second in 1896, ranks fourth in 1897; Carpetings, ranking third in 1896, ranks second in 1897; Woollen Goods, ranking fourth in 1896, ranks third in 1897; Metals and Metallic Goods, ranking fifth in 1896, ranks sixth in 1897; Worsted Goods, ranking sixth in 1896, ranks eighth in 1897; Machines and Machinery, ranking seventh in 1896, ranks fifth in 1897; and Leather, ranking eighth in 1896, ranks seventh in 1897.

In this connection we present a series of separate tables for the nine leading industries for the purpose of comparison between the years 1896 and 1897, bringing forward for that purpose data contained in the table on pages 188 and 189. The first comparison relates to Boots and Shoes.

Boots and Shoes. [Comparisons for 675 Establishments.]

CLASSIFICATION.	1896	1897
Amount of capital invested, ...	\$21,550,886	\$23,014,435
Value of goods made and work done (gross product), ...	\$93,590,910	\$99,773,806
Value of stock used and other materials consumed in production, .	\$57,383,071	\$61,012,700
Industry product (gross product less value of stock and materials),	\$36,207,839	\$38,761,106
Wages (labor's direct share of product), ...	\$21,868,856	\$22,505,580
Profit and minor expense fund (industry product less wages), .	\$14,338,983	\$16,255,616
Percentage of industry product paid in wages, ...	60.40	58.06
Percentage of industry product devoted to profit and minor expenses,	39.60	41.94
Percentage of profit and minor expense fund of capital invested, .	66.54	70.63

The percentages of industry product paid in wages in 1896 and 1897 were 60.40 and 58.06, respectively, a decrease in the

last named year. The percentage of industry product devoted to profit and minor expenses shows an increase, being 39.60 in 1896 and 41.94 in 1897. The percentage which this profit and minor expense fund forms of capital invested was 70.63 in 1897 as against 66.54 in 1896; that is to say, a smaller portion of the amount remaining in this industry, after eliminating the cost of stock, was devoted to wages in 1897 than in 1896, leaving a slightly larger amount for the payment of expenses (other than wages and stock) and for profit, and this amount formed a larger percentage of the total capital in the industry in 1897 than in 1896.

A similar comparison for Carpetings follows :

Carpetings. [Comparisons for 12 Establishments.]

CLASSIFICATION.	1896	1897
Amount of capital invested, ...	\$6,063,982	\$6,784,921
Value of goods made and work done (gross product), ...	\$5,941,456	\$6,364,709
Value of stock used and other materials consumed in production, ...	\$3,445,442	\$3,898,404
Industry product (gross product less value of stock and materials), ...	\$2,496,014	\$2,466,305
Wages (labor's direct share of product), ...	\$1,490,036	\$1,605,379
Profit and minor expense fund (industry product less wages), ...	\$1,005,978	\$860,926
Percentage of industry product paid in wages, ...	59.70	65.09
Percentage of industry product devoted to profit and minor expenses, ...	40.30	34.91
Percentage of profit and minor expense fund of capital invested, ...	16.59	12.69

The percentage of industry product paid in wages in this industry in 1896 and 1897 was 59.70 and 65.09, respectively, an increase in the last named year. Deducting wages, the fund devoted to profit and minor expenses declined from 40.30 per cent in 1896 to 34.91 per cent in 1897, and this fund formed but 12.69 per cent of capital invested in 1897 as against 16.59 per cent in 1896.

The next table presents a comparison for Cotton Goods.

Cotton Goods. [Comparisons for 163 Establishments.]

CLASSIFICATION.	1896	1897
Amount of capital invested, ...	\$112,561,310	\$110,655,808
Value of goods made and work done (gross product), ...	\$85,561,417	\$85,414,028
Value of stock used and other materials consumed in production, ...	\$49,172,309	\$48,987,402
Industry product (gross product less value of stock and materials), ...	\$36,389,108	\$36,426,626

Cotton Goods—Concluded.

CLASSIFICATION.	1896	1897
Wages (labor's direct share of product), ...	\$25,603,529	\$26,460,493
Profit and minor expense fund (industry product less wages), .	\$10,785,579	\$9,966,133
Percentage of industry product paid in wages, ...	70.36	72.64
Percentage of industry product devoted to profit and minorexenses,	29.64	27.36
Percentage of profit and minor expense fund of capital invested, .	9.58	9.01

In this industry, the percentage of industry product paid in wages slightly increased in 1897 as compared with 1896, the percentages being 72.64 and 70.36, respectively. Of course, the percentage of industry product devoted to profit and minor expenses correspondingly decreased to 27.36 in 1897 as against 29.64 in 1896. The profit and minor expense fund formed 9.01 per cent of capital in 1897 as against 9.58 per cent in 1896.

The next table relates to Leather.

Leather. [Comparisons for 126 Establishments.]

CLASSIFICATION.	1896	1897
Amount of capital invested, ...	\$6,995,486	\$7,559,363
Value of goods made and work done (gross product), ...	\$18,740,542	\$21,837,377
Value of stock used and other materials consumed in production,	\$13,166,483	\$16,195,365
Industry product (gross product less value of stock and materials),	\$5,574,059	\$5,642,012
Wages (labor's direct share of product), ...	\$2,851,793	\$3,054,684
Profit and minor expense fund (industry product less wages), .	\$2,722,266	\$2,587,328
Percentage of industry product paid in wages, ...	51.16	54.14
Percentage of industry product devoted to profit and minorexenses,	48.84	45.86
Percentage of profit and minor expense fund of capital invested, .	38.91	34.23

As in the comparisons of the preceding industry, an increase in the percentage of industry product paid in wages appears, the percentages being 54.14 in 1897 as against 51.16 in 1896. The percentage of industry product devoted to profit and minor expenses shows a decrease from 48.84 in 1896 to 45.86 in 1897, and a like decrease is found in the percentage of profit and minor expense fund of the capital, falling from 38.91 in 1896 to 34.23 in 1897.

The next table presents a comparison for Machines and Machinery.

Machines and Machinery. [Comparisons for 360 Establishments.]

CLASSIFICATION.	1896	1897
Amount of capital invested, ...	\$26,058,192	\$27,574,500
Value of goods made and work done (gross product), ...	\$28,455,766	\$25,159,094
Value of stock used and other materials consumed in production, .	\$10,377,522	\$8,978,151
Industry product (gross product less value of stock and materials),	\$18,078,244	\$16,180,943
Wages (labor's direct share of product), ...	\$9,941,133	\$9,116,199
Profit and minor expense fund (industry product less wages), .	\$8,137,111	\$7,064,744
Percentage of industry product paid in wages, ...	54.99	56.34
Percentage of industry product devoted to profit and minor expenses,	45.01	43.66
Percentage of profit and minor expense fund of capital invested, .	31.23	25.62

The percentage of industry product paid in wages in this industry rose from 54.99 in 1896 to 56.34 in 1897. A corresponding decrease is found in the percentage of industry product devoted to profit and minor expenses, falling from 45.01 in 1896 to 43.66 in 1897. The percentage of profit and minor expense fund of capital invested also declined, the decrease being from 31.23 in 1896 to 25.62 in 1897.

A comparison for Metals and Metallic Goods follows :

Metals and Metallic Goods. [Comparisons for 384 Establishments.]

CLASSIFICATION.	1896	1897
Amount of capital invested, ...	\$17,570,592	\$18,308,737
Value of goods made and work done (gross product), ...	\$22,774,663	\$22,172,268
Value of stock used and other materials consumed in production, .	\$10,321,786	\$9,953,944
Industry product (gross product less value of stock and materials),	\$12,452,877	\$12,218,324
Wages (labor's direct share of product), ...	\$6,920,670	\$6,707,323
Profit and minor expense fund (industry product less wages), .	\$5,532,207	\$5,511,001
Percentage of industry product paid in wages, ...	55.57	54.90
Percentage of industry product devoted to profit and minor expenses,	44.43	45.10
Percentage of profit and minor expense fund of capital invested, .	31.49	30.10

In this industry, the percentage of industry product paid in wages declined from 55.57 in 1896 to 54.90 in 1897. The percentage of industry product devoted to profit and minor expenses rose correspondingly from 44.43 in 1896 to 45.10 in 1897. The percentage of profit and minor expense fund of capital invested fell from 31.49 in 1896 to 30.10 in 1897.

The facts for Paper are shown in the next table.

Paper. [Comparisons for 91 Establishments.]

CLASSIFICATION.	1896	1897
Amount of capital invested, ...	\$20,977,979	\$20,989,176
Value of goods made and work done (gross product), ...	\$19,865,086	\$19,933,033
Value of stock used and other materials consumed in production, .	\$11,825,894	\$11,387,275
Industry product (gross product less value of stock and materials),	\$8,039,192	\$8,545,758
Wages (labor's direct share of product), ...	\$3,880,395	\$3,800,744
Profit and minor expense fund (industry product less wages), .	\$4,358,797	\$4,745,014
Percentage of industry product paid in wages, ...	45.78	44.48
Percentage of industry product devoted to profit and minorexenses,	54.22	55.52
Percentage of profit and minor expense fund of capital invested, .	20.78	22.61

In this industry, the percentage of industry product paid in wages fell from 45.78 in 1896 to 44.48 in 1897, while the percentage of industry product devoted to profit and minor expenses rose from 54.22 in 1896 to 55.52 in 1897, accompanied by an increase in the percentage of profit and minor expense fund of capital invested from 20.78 in 1896 to 22.61 in 1897.

The next table relates to Woollen Goods.

Woollen Goods. [Comparisons for 117 Establishments.]

CLASSIFICATION.	1896	1897
Amount of capital invested, ...	\$21,655,660	\$25,390,647
Value of goods made and work done (gross product), ...	\$20,885,906	\$25,599,328
Value of stock used and other materials consumed in production, .	\$12,183,271	\$15,036,303
Industry product (gross product less value of stock and materials),	\$8,702,635	\$10,563,025
Wages (labor's direct share of product), ...	\$5,494,181	\$6,285,365
Profit and minor expense fund (industry product less wages), .	\$3,208,454	\$4,277,660
Percentage of industry product paid in wages, ...	63.13	59.50
Percentage of industry product devoted to profit and minor expenses,	36.87	40.50
Percentage of profit and minor expense fund of capital invested, .	14.82	16.85

In this industry, there is noted a falling off in the percentage of industry product paid in wages, declining from 63.13 in 1896 to 59.50 in 1897, matched by a corresponding increase in the percentage of industry product devoted to profit and minor expenses, which rose from 36.87 in 1896 to 40.50 in 1897. The percentage of profit and minor expense fund of capital invested also shows an increase, rising from 14.82 in 1896 to 16.85 in 1897.

The final table relates to Worsted Goods.

Worsted Goods. [Comparisons for 31 Establishments.]

CLASSIFICATION.	1896	1897
Amount of capital invested, ...	\$14,623,706	\$16,397,790
Value of goods made and work done (gross product), ...	\$17,829,822	\$24,111,098
Value of stock used and other materials consumed in production, .	\$10,641,690	\$14,676,178
Industry product (gross product less value of stock and materials),	\$7,188,132	\$9,434,920
Wages (labor's direct share of product), ...	\$3,819,656	\$4,523,314
Profit and minor expense fund (industry product less wages), .	\$3,368,476	\$4,906,606
Percentage of industry product paid in wages, ...	53.14	48.00
Percentage of industry product devoted to profit and minor expenses,	46.86	52.00
Percentage of profit and minor expense fund of capital invested, .	23.03	29.92

In this industry, a decrease in the percentage of industry product paid in wages is found; this percentage was 53.14 in 1896 and 48 in 1897. The percentage of industry product devoted to profit and minor expenses increased from 46.86 in 1896 to 52 in 1897, and the percentage of profit and minor expense fund of capital invested also rose from 23.03 in 1896 to 29.92 in 1897.

The returns permit of the following condensed general statement as regards the years 1896 and 1897 for the 4,695 establishments :

CAPITAL INVESTED.

The increase in capital devoted to production in 1897 as compared with 1896, in All Industries, amounted to 3.56 per cent. In connection with this statement, it should be remembered that this does not necessarily imply an investment of more money in productive enterprises; and when taken in conjunction with the other facts relative to the condition of the industries during the year, it is apparent that while a statistical increase is shown, the increase may be due to the large amount of stock on hand and in process of manufacture, or to some of the items classed as capital, other than cash, as explained in the statement on pages 158 and 159. In the nine leading industries, representing 65.08 per cent of the total capital as returned in 1897, the following facts appear: In 1897, a decrease of capital is shown in but one of these industries, namely, Cotton Goods, of 1.69 per cent. In each of the other leading industries, eight in number, the capital de-

voted to production exhibits an increase in 1897 as compared with 1896, the percentages being as follows: Woollen Goods, 17.25; Worsted Goods, 12.13; Carpetings, 11.89; Leather, 8.06; Boots and Shoes, 6.79; Machines and Machinery, 5.82; Metals and Metallic Goods, 4.20; and Paper, 0.05.

STOCK USED.

In All Industries, considered in the aggregate, the value of stock used in 1897 shows an increase as compared with 1896 of 4.07 per cent. In the nine leading industries, the value of stock used in which amounted to 57.59 per cent of the aggregate value of stock used, as returned in 1897, an increase is shown in the following industries, the percentages of increase being annexed, Worsted Goods, 37.91; Woollen Goods, 23.42; Leather, 23; Carpetings, 13.15; and Boots and Shoes, 6.33. In the other four of the leading industries the following percentages of decrease appear: Machines and Machinery, 13.48; Paper, 3.71; Metals and Metallic Goods, 3.56; and Cotton Goods, 0.38.

GOODS MADE.

The aggregate value of goods made and work done in All Industries, in 1897 as compared with 1896, shows an increase of 3.04 per cent. In six of the nine leading industries the following percentages of increase appear: Worsted Goods, 35.23; Woollen Goods, 22.57; Leather, 16.52; Carpetings, 7.12; Boots and Shoes, 6.61; and Paper, 0.34. In the other leading industries the following percentages of decrease are shown: Machines and Machinery, 11.59; Metals and Metallic Goods, 2.65; and Cotton Goods, 0.17. The aggregate value of the goods made and work done in these nine leading industries represented 57.27 per cent of the total value of goods made and work done, as returned by the 4,695 establishments in 1897.

PERSONS EMPLOYED.

The increase in the average number of persons employed in All Industries, in 1897 as compared with 1896, was 8,324, or 2.72 per cent. An increase is also shown in the smallest number of persons employed of 19,607 persons, or 8.12 per cent; while the number of persons employed at the periods of

employment of the greatest number shows an increase of but 5,245 persons, or 1.46 per cent. The range of unemployment was narrower in 1897 than in 1896. In but two of the leading industries, *Machines and Machinery* and *Metals and Metallic Goods*, a decrease in the average number of persons employed appears, the percentages being, respectively, 6.03 and 0.74. In each of the other nine leading industries the following percentages of increase in the average number of persons employed are found: *Worsted Goods*, 16.02; *Woollen Goods*, 11.78; *Carpetings*, 6.87; *Leather*, 6.65; *Boots and Shoes*, 5.20; *Paper*, 2.92; and *Cotton Goods*, 1.90.

WAGES PAID.

The total amount paid in wages in the 4,695 establishments represented in the 77 industries increased 1.53 per cent in 1897 as compared with 1896. In seven of the nine leading industries the following percentages of increase appear: *Worsted Goods*, 18.55; *Woollen Goods*, 14.40; *Carpetings*, 7.74; *Leather*, 7.11; *Cotton Goods*, 3.35; *Paper*, 3.27; and *Boots and Shoes*, 2.91. A decrease is shown for *Machines and Machinery* of 8.30 per cent and for *Metals and Metallic Goods* of 3.08 per cent.

The average yearly earnings per individual, without regard to sex or age, employed in the 77 industries was \$426.66 in 1896 and \$421.69 in 1897, a decrease of 1.16 per cent. The range from highest to lowest average yearly earnings was from \$739.17 to \$281.40 in 1896 and from \$752.31 to \$299.64 in 1897. The higher earnings rule in the industries demanding greater skill and employing males chiefly, and the lower in factory industries employing a large proportion of females and young persons.

PROPORTION OF BUSINESS DONE.

The average proportion of business done reached 59.99 per cent in 1896 and 59.72 per cent in 1897 of the full productive capacity of the 4,695 establishments, a decrease of 0.27 per cent in the latter year.

Each of the employes worked, on an average, 281.03 days in 1896 and 283.33 days in 1897, an increase of 2.30 days, or 0.82 per cent.



INDUSTRIAL CHRONOLOGY.

1897.

INDUSTRIAL CHRONOLOGY—1897.

Abington. In January, saw mill of William B. Poole destroyed by fire. *April.* Patent granted to William B. Arnold on shoe-tree last. *May.* Heel factory of W. S. O'Brien damaged by fire. *July.* M. N. Arnold & Co., shoes, decided to build addition to factory; work begun in October and completed in December. *September.* Machine lasters employed at factories of Cobb & Thompson, M. N. Arnold & Co., King Bros., and Lewis A. Crossett, struck; later, resumed operations lasting by hand. *December.* Patent granted to Herbert H. Buffum on eyelet-delivering mechanism for eyeletting machines.

Acton. In October, two mills of American Powder Co. destroyed by explosion.

Adams. In January, Renfrew Manufacturing Co., cottons, resumed operations; in February, added new looms. *February.* Mannesmann Cycle Tube Co. began operations. *March.* Michael Glennon, of Dalton, and New York parties leased idle mill of Phillips Woollen Co. and refitted it with modern machinery; operations begun in April under name of Windsor Falls Manufacturing Co.; in May, new machinery added and dyeing department started up; in June, started up remaining departments and ran overtime. — Mannesmann Cycle Tube Co. shut down for inventory. *June.* Renfrew Manufacturing Co. shut down temporarily on account of scarcity of orders; resumed later. *July.* Greylock Shirt Co. resumed operations after shutdown. — W. C. Plunkett & Sons, cottons, began improvements in dyehouse; completed in September. *August.* L. L. Brown Paper Co. made improvements in plant. *September.* Greylock Shirt Co. increased force and machinery. *October.* Patent granted to Walter Lacey on stopping mechanism for looms.

Agawam. In January, patent granted to Horace A. Moses on paper-making machine. *February.* Agawam Co., woollens, reduced running time. *August.* Land secured by C. W. Herrick for erection of wire factory. *October.* Agawam Co. ran overtime.

Amesbury. In January, Eastern Cycle Manufacturing Co. purchased plant of Amesbury Cycle Co. — Patent granted to Patrick J. Hanley on damper and heat deflector. — Fire in picker room of Hamilton Woollen Co. caused a few days' suspension. *February.* Samuel R. Bailey & Co., carriages, added new machinery for the manufacture of rubber-tired wheels. — Merrimac Hat Co. increased running time. — Hamilton Woollen Co. ordered new spinning frames. — Patent granted to Elbridge S. Feltch and C. E. Stone on machine for drilling felles and tires of wheels. *March.* Amesbury Carriage Co. changed style to Amesbury Manufacturing Co. — Hamilton Woollen Co. shut down for one week. *May.* Hiram Lowell, for twenty years president of Merrimac Hat Co., died. *June.* Brigg's Carriage Co. shut down on account of high water. *July.* Patent granted to Irving H. Atwood on bicycle lantern. — C. D. Pecker & Co., shoes, put in new boiler and engine. — Eastern Cycle Co. made preparations for closing out business. *August.* Patents granted to Warren L. Braddock on chimney holder and to Charles E. Stone on door securer. — Government contract for 1,000 dozen men's wool hats awarded to Merrimac Hat Co. *September.* Amesbury Carriage Co. removed to new quarters. *October.* Biddle & Smart Co., carriages, shut down one week for repairs. — Merrimac Hat Co. began addition to plant; employes in wool trimming department struck because of dissatisfaction with price list; settled. *November.* Dudley J. Marston and Charles E. Stone established manufacture of carriage machinery under name of Carriage Machine Co. — Patent granted to David True on oil can. — Currier-Cameron Co., wheels, started on full time. — Patent granted to Samuel R. Bailey on body hanger for carriages.

Amherst. In November, patent granted to Henry M. Paine on magnet armature.

Andover. In January, Smith & Dove Manufacturing Co., linen thread, resumed full time. — Sutcliffe Bros., print and dye works, made alterations in plant. — Tyer Rubber

Co. reduced running time. *March.* Smith & Dove Manufacturing Co. received spinning machinery from Scotland. *April.* J. W. Barnard & Son, shoes, dissolved. — Weavers employed at Marland Mills, woollens, struck because of reduction; settled. *June.* Patent granted to Henry Edwards on combing machine. — Spinning and twisting departments of Smith & Dove Manufacturing Co. shut down temporarily for repairs. *September.* Patent granted to Andrew McTernan on syringe nozzle. *October.* Smith & Dove Manufacturing Co. made repairs on plant. *November.* Caleb T. Briggs, founder of Briggs & Allyn Manufacturing Co., Lawrence, died, aged 85 years.

Ashburnham. In August, patent granted to Goldsburly H. Pond, on method and apparatus for electro-chemical treatment of fibrous material; in October, on disintegrating machine. .

Ashby. In December, patent granted to Harlow R. Foster on incubator.

Ashland. In January, Charles H. Tilton, retired shoe manufacturer, died, aged 68 years. *April.* Citizens formed stock company and leased factory for the manufacture of shoes; capital stock \$5,000. *June.* Ashland Shoe & Leather Co. started up on full time; in November, temporary shutdown occurred; in December, resumed operations.

Athol. In January, work of rebuilding sash and blind factory of Edwin Ellis & Son begun; to be 40 x 150 feet, three stories; completed in April and business started up. — Miller's River Manufacturing Co., woollens, suspended operations for several days on account of ice. *April.* Patent granted to Leroy S. Starrett on speed indicator. — Box factory of Cyrus D. Davis and wood-turning shop of H. M. Peckham destroyed by fire. *May.* Patents granted to Stephen H. Bellows on spirit level and to Edward C. Clapp on micrometer gauge. *June.* Patents granted to Alfred H. Fallen on bicycle support for beginners and to Alfred G. Osgood on valve. — Edwin Ellis & Son suspended operations. *July.* Plant of O. F. Amsden sold to E. F. Bragg of Boston for the manufacture of machinery used in rubber manufacture. — Bates Bros., wallets, ran nights to fill orders; work begun on changes and improvements in buildings. *September.* Hill & Greene, shoes, shut down for stock taking and repairs. *October.* Patent granted to Burnside E. Sawyer on screw-thread gauge. — Kendall Mill of Miller's River Manufacturing Co. damaged by fire. *December.* Manufacturing plant of Edwin Ellis & Son sold at auction. — Piano case factory of Goddard & Manning destroyed by fire.

Attleborough. In February, factory of J. W. Luther & Co., lapidaries, damaged by explosion. *March.* Plant of Hebron Manufacturing Co. damaged by fire. *June.* Gold Medal Braid Co. incorporated; capital stock, \$30,000. *September.* E. P. Claffin and H. N. Orup made arrangements for establishment of new machine shop to do work for jewelry manufacturers, formerly done by the Mossberg Manufacturing Co. *December.* Patent granted to Thomas Giguere on adding machine.

Avon. In January, strike occurred among lasters at shoe factory of L. G. Littlefield; in May, operations resumed after shutdown of several weeks. *June.* Unoccupied shoe factory leased by syndicate of Boston men; to be started up.

Ayer. In January, factory formerly occupied by Merrill-James Shoe Co. leased by John W. Woodbury, of Cambridge, for the manufacture of women's shoes. *May.* Ayer Tannery Co., new establishment, added more machinery; in June, increased force; in December, made repairs.

Barnstable. In November, patent granted to Francis W. Parsons on shipping case.

Barre. In June, property of J. M. Noyes Shoe Co. sold at auction; started up in July by Samuel B. Thing under name of Barre Shoe Co. — Patent granted to Harding Allen on mowing-machine sharpener. *August.* Smithville Mill, cottons, ran on 40-hour time. *December.* Barre Shoe Co. added machinery. — Patent granted to Thomas E. and C. T. Rich on machine for jointing bars of window sashes.

Becket. In January, Becket Silk Co. increased force.

Bellingham. In January, Ray's Woollen Co. shut down portion of plant indefinitely. *April.* Taft, Murdock, & Co., woollens, ran full. *August.* Ray's Woollen Co. started

up No. 1 mill after shutdown of several weeks. *September.* Taft, Murdock, & Co. began erection of addition to plant; of brick, 26 x 120 feet, two stories; in November, added new looms.

Belmont. In January, Charles S. Fifield, inventor and manufacturer of boot and shoe machinery, died, aged 53 years. *June.* Patent granted to Alexander Y. Cochrane on yielding wire-seat frame. *October.* Patent granted to John Kilburn on bearing for spindles.

Bernardston. In June, C. S. Barber purchased Hale's saw and grist mill and began operations.

BEVERLY. In January, work of rebuilding factory of Seth Norwood Shoe Co. begun.—W. A. McDonald & Co. established to manufacture machinery, shafting, hangers, etc. *February.* John H. Sanborn & Co., shoes, dissolved; business continued by George V. Brown.—Strike occurred among cutters at shoe factory of Woodbury Bros. *April.* Patent granted to John F. Davey and S. W. Ladd on pegging machine. *June.* John M. Whitcomb established the manufacture of shoes. *August.* Patent granted to Edward F. Hodgkins on pad for buffing machines. *September.* Harrington & Co. established manufacture of shoes.—A. W. Warren Co., shoes, leased larger quarters. *November.* Murray, Cone, & Co., shoes, enlarged quarters.—Charles L. Elliott of Danvers established manufacture of shoes.—T. E. Frazier & Co. succeeded by Frazier & Co.—John Magee, founder of Magee Furnace Co., died, aged 78 years. *December.* A. W. Warren Co. succeeded by Warren & Co.—Consolidated Hand Method Lasting Machine Co. enlarged quarters.—Glove manufacturing plant removed from New York to this place.

Billerica. In August, Talbot Mills, woollens, shut down for repairs and setting up of 20 new looms; resumed in September after an idleness of two weeks.

Blackstone. In January, Lawrence Felting Co. conducted experiments in new line of goods.—Millville Factory of Woonsocket Rubber Co. resumed operations on full time.—Waterford Mill No. 2, not in operation, damaged by fire. *February.* Lawrence Felting Co. shut down for repairs; resumed in March.—Millville Factory of Woonsocket Rubber Co. shut down indefinitely; resumed operations in April.—SpINNERS at mill of Blackstone Manufacturing Co., cottons, struck; places filled and business continued. *July.* Lawrence Felting Co. ran overtime.—Blackstone Manufacturing Co. shut down for one week.—Waterford Mill No. 2, Blackstone Woollen Co., damaged by fire. *August.* Woonsocket Rubber Co. increased force at Millville Factory.—Blackstone Manufacturing Co. shut down for one week; installed additional boiler of 400 horse power.—Picker room of Lawrence Felting Co. damaged by fire. *September.* Millville Factory of Woonsocket Rubber Co. ran overtime.—Satinet mill owned by A. M. Armstrong leased by Lawrence F. Kilty and James McCann and started up under name of Kilty & McCann.—Negotiations entered into for the purchase and starting up of Waterford Woollen Mills Nos. 1 and 2, after long idleness.—Blackstone Manufacturing Co. shut down for one week. *October.* Millville Factory of Woonsocket Rubber Co. ran overtime. *November.* Charles Fletcher of Providence purchased portion of Waterford Mill property. *December.* Kilty & McCann ran overtime; plant leased to J. H. Donahue.

BOSTON. In January, Standard Cordage Co., after a shutdown of three years, resumed operations.—Contracts let and work begun on new Southern Union Station.—Patents granted as follows: Thomas K. Keith, lasting device; Guy Mafera, spring bed frame; Herbert M. Nichols, lacing fastener for boots and shoes; Frank Rogers, weather check for doors; Peter A. Coupal, machine for making and driving staples; Wm. Lloyd, shirt protector; Edward E. Murphy, apparatus for concentrating vinegar; William Robinson, rail joint; Levi L. Rowe, automatic regulator for liquid heaters; Joseph A. White, typewriting machine; George T. Anderson, nail-forming die; James F. Goodridge, pocket cash register; Wm. B. Mack, injector; Charles C. Richmond, hasp fastener; and Frank W. Merrick, thread-gripping device for wax-thread sewing machines.—Factories of Savage & Co., spring beds, and Broadway Manufacturing Co., clothing, damaged by fire.

February. Boston Spiral Tagging Co. established manufacture of shoe laces; incorporated under laws of Maine; capital stock, \$50,000.—Patents granted as follows: Stephen Porter, repair tool for bicycle tires; Scott H. Tolman, garment hanger; William H. Lloyd, bath-tub supply pipe; Andrew G. Paul, indicating valve; John C. Stone, reso-

nant electric circuit; Simon W. Wardwell, Jr., tension device; Paul J. Brown, percolator stand; Simon A. Politsky, car coupling; and Percy C. Rogers, automatic switch.—Stowe, Bills, & Hawley, whose factory was located on site of new Southern Union Station, removed to Hudson.

March. Plant of Kidder Press Manufacturing Co. ran nights.—American Tool & Machine Co. moved into new quarters.—Patents granted as follows: Peter A. Coupal, sewing machine; Davis F. Hartford, automatic variable speed and stop mechanism; Thomas K. Keith, lasting machine; George A. Spooner, malling machine; Christian L. Berger, surveyors' instrument; Albert and D. Bramer, disk harrow or cultivator; Ralph R. Gibson, gymnastic club; Henry N. Libbey, gate valve and cash register; Bernice J. Noyes, message recording instrument and electric signaling apparatus; Lansing Onderdonk, feeding mechanism for sewing machines; James E. Treat, car fender; Josiah B. Anderson, marine safe float; James Buckner, electric lamp post; Eugene F. Davenport, skiving machine; and Nathaniel Lombard, telephone transmitter.—Planing mill of Woodbury & Leighton, builders, damaged by fire.—Granite cutters of Boston and vicinity and stitchers employed by Union Rubber Co. struck on account of wages; settled in both cases.

April. The following shoe-lasting machine manufacturing companies combined with headquarters in Boston: Chase, Continental, McKay-Copeland, Boston, and Consolidated Hand Method.—Century Hammock Co. organized; capital stock, \$125,000.—Bird & Stevens, shoes, succeeded by Donovan & Pierce.—Following patents granted: Ivan A. Centervall, envelope; Hiram B. Nickerson, exercising device; Levi L. Rowe, automatic thermostatic valve; William W. Andrews, roller-bushing for block sheaves; James H. Boylett, switch lock; Henry H. Ames, apparatus for amalgamating and concentrating precious metals; Elliot Glover, book holder; Hosea W. Libbey, apparatus for inflating bicycle tires; Francis Meisel, feeding, cutting, and printing machine; Albert L. Parcellle, armature for dynamo electric machines; Paul E. Collins, car gate; Joseph P. Frizzell, power transmitting mechanism; David Hunt, ladder; Richard Lavery, travelling crane; and Albert F. Preston, lasting pliers.—Factories of McKey & Co., manufacturing chemists, and H. H. Osgood & Co., weather strips, damaged by fire.

May. Goodyear Shoe Machinery Co. moved into new factory.—Following patents granted: Harry A. Spiller, steering gear for vessels; Ernest R. Freeman, photographic camera; James A. Deuther, electrode; William G. Anderson, heel for shoes; George S. Brainerd, float valve and steam trap; John L. Condon, safety gate for street cars; and William B. Mason, steam trap.—J. Francis Hayward, rubber manufacturer, and Jeremiah M. Watson, inventor and member of firm of Potter & Watson, shoe shanks, died.—Factories of Phillander Derby & Co., chairs, and Cutter & Parker, sashes, doors, and blinds, damaged by fire.—Strike occurred among laborers on Subway.

June. Massachusetts Leather Co. incorporated; capital stock, \$50,000.—Plans made by D. W. & L. Puffer for new manufacturing building; of brick, 21 x 48 x 67 feet, six stories.—Russ & Schellenberg, cut soles, and Tubular Rivet & Stud Co. removed to new offices.—Plant of Evans Artificial Leather Co. purchased by Boston Artificial Leather Co.—Following patents granted: William C. Cross, rail coupling; Hosea W. Libbey, steam bicycle; Anson K. Cross, drawing instrument; Warren H. McCurdy, speed indicator for ships; George F. McIndoe, metal-planing machine; Albert F. Preston, lasting machine; George M. Guild, stringing and tuning device for pianos; Eugene H. Leighton, interconvertible bed or couch; Albert F. Norris, piano pedal; William H. Foss, calculating apparatus; Joseph A. McNeill, road vehicle; Hans G. Osterberg, pianoforte action; and Joseph D. Prescott, wheel for bicycles.—Factories of O. J. Faxon, pianos and bicycles, and Morse Bros., paper boxes, damaged by fire.—Seamen struck for an increase in wages and glaziers for a reduction in hours.

July. Norton Iron Co. changed title to New England Structural Co.—The Walter M. Lowney Co., confectionery, began erection of new factory.—J. H. Thomas & Co., shoes, changed style to Thomas Shoe Manufacturing Co. and removed to Charlestown.—Following patents granted: Edward C. Bates, whistle for buoys; Charles F. Haynes, arm rest for school chairs; George A. Hunt and W. C. Trussell, station indicator; Thomas K. Keith, sewing machine for lasting boots or shoes; Alphonso E. Kenney, bed lock; Wellington P. Kidder, key action for typewriting machines; Charles H. Knowlton, attachment for radiators; Ephraim Smith, speed-controlling apparatus for lathes; Jacob B. Henry, upright piano; Frederick M. Keith, refrigerator door; George F. Rideout, coat hanger; and Albert L. Parcellle, speed indicator.—Waldo F. Ward, retired woollen manufacturer, died, aged 80 years.

August. Enterprise Manufacturing Co. incorporated under laws of Maine; to manufacture lasting machinery; capital stock, \$75,000.—Force reduced at Municipal Printing

Plant. — Patents granted as follows: Amasa C. Heath and Fred. H. White, machine for making rands; Geo. D. Burton, electrolytic heating apparatus; Nathaniel Lombard, attachment for speed governors; Oscar A. Hilliard, dissolving key for stereopticons; Francis Melsel, machine for cutting paper into sheets and printing machine; and Sidney A. Reeve, apparatus for utilizing liquid or gaseous fuel for power and heat engine. — Factories of American Wringer Co. and Pierce & Gardner, lamp and window shades, damaged by fire.

September. American Leather Co., manufacturers, incorporated; capital stock, \$25,000. — Portion of Subway completed and opened to travel. — Following patents granted: William E. Fischer, channel flap; Henry J. Barnes, humidifier; George H. Clark, treeing machine; Michael O'Donovan, device for indicating escape of gas; Charles H. Phinney, watchman's electric time recorder; Alberto T. Van Horn, quartz-milling machine; Joseph E. Bertrand, wax-thread sewing machine; Simon W. Wardwell, Jr., cop-winding machine; and John Goettel, car coupling. — George W. Adams, inventor of system of electric protection, died.

October. Second section of Subway completed. — Following patents granted: George F. Dinsmore, steam generator; Edward Erickson, sole-rounding machine; Bernard Nelson, diving apparatus; Christian L. Berger, surveyors' instrument; Thomas Tolson, unicycle and bicycle frame; Eugene Childs, lathe; James M. Boyle, switch; Charles P. Dyer, detachable joint for metallic bedsteads; William Robinson, mechanical movement; Andrew T. MacCoy, automatic boiler feeder and continuous boiler feeder; and Louis McCarthy, insulating coupling for electric-wire conduits. — Charles C. Poor, retired leather manufacturer, died, aged 65 years. — Franklin Smith, president of G. W. & F. Smith Iron Co., died, aged 66 years.

November. Patents granted as follows: William Robinson, electric railway system; George L. Damon, safe or vault; Albert J. Stirk, wire stretcher; Hosea R. Tillison, belt pulley; Charles M. Biddle, clothes drier; Albert F. Preston, hand-tacking tool; William A. Adams, safety cap for lamps; William H. Pearson, bumper for railway cars; George D. Burton, apparatus for electrically heating metals and ores; and Adam Dicker, moulding machine. — Oscar Gowing, shirt manufacturer, died, aged 63 years. — Building occupied as warehouse by Heywood Bros. & Wakefield Co. and W. B. Badger & Co., furniture, damaged by fire.

December. Boston Strawboard Co. incorporated; capital stock, \$50,000. — J. G. McCarter, shoe stays, moved into new quarters. — Transportation of mail by means of underground pneumatic tubes established. — Patents granted as follows: Thomas C. Robinson, tack-driving machine; Albert E. Ayer, machine for skiving counters; John W. Denno, fastening for boots or shoes; John F. Warner, heel; Albert F. Preston, lasting machine; Charles F. Ames and H. A. Pearson, photographic camera; Charles E. Davis, mechanism for spring-back chairs; John Bray, railway brake; Albert C. Fairbanks, bicycle; and Ernest M. Skinner, pipe organ. — Fires occurred as follows: Plant of New England Fibre Co.; bookbindery of Little, Brown, & Co.; printing office of Nash & Co., and cap factory of Rosenfield Bros.

[Brighton.] In May, factory of Sewall & Day Cordage Co. damaged by explosion; in June, damaged by fire.

[Charlestown.] In November, Augustus Gillette, of E. A. Gillette & Sons, carriages, died, aged 70 years.

[Dorchester.] In October, Boston Gas Light Co. built addition to plant; of brick, two stories, 55 x 184 feet.

[East Boston.] In January, plant of Condor Iron Foundry Co. destroyed by fire; in March, rebuilt; 75 x 180 feet, two stories. *April.* Factories of Frame & McPherson, cabinet makers, Phonoharp Co., musical instruments, and planing mill and lumber yard of Samuel T. Manson & Co. destroyed by fire.

[Jamaica Plain.] In April, Otto Gunther erected building for candy factory; of wood, 30 x 40 feet, three stories.

[Mattapan.] In February, plant of Poole Bros., mouldings and interior finish, destroyed by fire. *April.* Planing mill of J. H. Burt & Co. damaged by fire.

[Roxbury.] In January, carriage factory of J. P. and W. H. Emond damaged by fire. — Firemen employed by Boston Belting Co. struck for reduction in hours and increase in wages; places filled. *May.* Plant of Star Brewing Co. damaged by fire. *June.* Roxbury Brewing Co. incorporated under laws of New Jersey; capital stock, \$350,000; erection of brewery completed. — Strike occurred among carpenters and among employees of Trimount Manufacturing Co. *July.* Roxbury Carpet Co. shut down for two weeks on account of dull trade. — Hanley & Casey Brewing Co. dedicated new plant; manufacture of beer added to that of ale. *August.* Iron moulders employed by Me-

chanics Iron Foundry Co. struck because of attempt to restore piece system of wages. *October.* Building occupied by Dennison Tag Co. damaged by fire. *November.* Thomas G. Plant Co. added new lasting machines.

[South Boston.] In January, plant of Frank L. Young & Kimball, oils, destroyed by fire; in April, contract let for rebuilding. *May.* Strike occurred among employes of F. D. Pell & Co., bagging, barrel covers, etc. *June.* Consolidated Fastener Co. purchased land in July, began erection of factory, 40 x 156 feet, two stories. — New England Telephone & Telegraph Co. made plans for erection of storehouse; of brick, 49 x 100 feet, three stories. — Walworth Manufacturing Co., steam and gas fittings, purchased land for extension of plant.

Bourne. In October, boat building shops of C. C. Hanley destroyed by fire. *December.* Keith Manufacturing Co., freight cars, resumed operations after shutdown of one year.

Braintree. In March, Jenkins Manufacturing Co., shoe strings, added new machines. *April.* Patent granted to William H. Currier on sewing machine. *July.* D. B. Closson & Co., shoes, resumed operations after shutdown. *August.* Franklin Shaw, retired shoe manufacturer, died, aged 75 years. *September.* Patent granted to Nathaniel F. T. Hunt on non-refilling bottle; in October, to George H. Tuttle on elevator.

Bridgewater. In January, patent granted to James (deceased) and George Ferguson on lasting machine; in June, to Henry O. Little on fruit box.

BROCKTON. In January, following new firms established the manufacture of shoes: Talbot & Packard; O'Donnell, Brennan, & Co.; and Parker & Lewis. — Monarch Rubber Co. began manufacture of punctureless tires. — Hurley Shoe Co. removed to new quarters. — Patents granted to Alfonso E. Judkins, caster, and to Charles S. Pierce, box-toe stiffener. — J. M. O'Donnell & Co., shoes, decided to remove to Milford. — Charles A. Eaton & Co., shoes, suspended operations. — Churchill & Alden, shoes, shut down. — H. M. Kingman, shoes, retired from business. — Factory of George H. Stevens & Co., shoe tools, destroyed by fire. — Strike occurred at shoe factory of T. D. Barry & Co.

February. Bouvé, Crawford, & Co., resumed operations after shutdown of several weeks. — C. A. Eaton & Co., shoes, resumed operations as a non-union shop. — W. H. Goodrich, inventor and manufacturer of shoe polish completed new factory building. — John B. Hadaway received patent on channel-flap laying machine. — Churchill & Alden, shoes, adjusted wage lists satisfactorily and resumed operations. — Henry F. Rooney leased factory for the manufacture of shoes. — R. B. Grover & Co., shoes, shut down. — L. C. Bliss & Co., shoes, removed to Whitman. — Strikes occurred at shoe factories of T. D. Barry & Co. and Joyce & Fletcher; settled. — Shank factory of J. E. Peckham & Co. damaged by fire.

March. Myron L. Keith invented two machines designed to cheapen cost of Goodyear welt shoes; new corporation, Gem Flexible Innersole Co., formed to manufacture them. — H. S. Crombie Manufacturing Co., machinery, established plant in this place. — Patents granted to John B. Hadaway on shoe-sewing and welt-beveling mechanism, and to George H. Gifford on sole machine and on sole-turning machine. — William F. Field of the Field-Hazard Co., shoes, died, aged 42 years. — Whitman & Keith, shoes, discharged force and resumed operations as a "free" shop. — Strike occurred among lasters at factory of Murphy & Finley; settled by shoe council. — Cutters at factory of F. M. Shaw & Son struck because of dissatisfaction with price list.

April. Isaac H. Fish & Co. established manufacture of box toes. — Eureka Box Toe Co. established manufacture in this place; incorporated; capital stock, \$5,000. — Automatic Electric Pump Co. of Boston established plant in former shoe factory; capital stock, \$1,000,000. — Brockton Gas Co. prepared plans for erection of new plant. — Brockton Box Toe Co. received order for 480,000 pairs of box toes from Europe. — T. D. Barry & Co. announced intention of removing to Easton. — McCarty, Sheehy, & Kendrick Co., shoes, increased force.

May. New York Suit and Cloak Co. established manufacture of women's clothing. — George B. Goddard, mallets, added story to factory. — T. D. Barry & Co. decided to remain in this place and leased the H. M. Kingman factory. — R. B. Grover & Co. began manufacture of new style of shoe. — McCarty, Sheehy, & Kendrick Co. leased larger quarters. — M. P. Clough & Co., shoes, started up on increased output after temporary suspension. — Talbot & Packard, shoes, dissolved, business continued by Talbot. — L. M. Reynolds & Co., shoes, reduced force; shut down for stock taking and resumed

with reduced prices. — Thompson Bros., shoes, shut down for inventory; resumed with reductions.

June. Patents granted to George H. Gifford on pressing form for sole-laying machines, and to Andrew H. Baker on last. — Commonwealth Box Toe Co. established manufacture in this place. — Bicycle manufacturing firm from New York made arrangements for erection of factory. — E. B. Jones, rands, succeeded by Bay State Rand Co. — Brockton Welting Co. received order from Germany for 40,000 yards of Goodyear welting. — Removals to new quarters: T. D. Barry & Co., McCarty, Sheehy, & Kendrick Co., Eureka Box Toe Co., and A. F. Caldwell, clothing. — J. E. Peckham & Co., steel shanks, began closing up business, preparatory to removing to New Hampshire. — Frederic F. Field became member of Field-Hazard Co. — L. M. Reynolds & Co. began making individual agreements with help. — F. E. White & Co., shoes, resumed after temporary suspension. — Hagerty & Sullivan, shoes, decided to remove to Randolph and occupy the John Peach factory. — Snell & Atherton, shoe tools, began shutting down on Saturdays. — W. L. Douglas Shoe Co., Preston B. Keith, and George E. Keith, shoes, shut down temporarily. — George G. Snow, shoes, reduced force. — Stacy, Adams, & Co. reduced wages of sole fasteners to equalize prices. — Charles A. Eaton & Co., shoes, reduced to half time.

July. Patent granted to Benjamin F. Dunham on skiving machine. — New style of women's shoe, with elastic goring top, invented by Elizabeth Turner. — Charles A. Eaton & Co., shoes, incorporated. — New firm, Union Shoe Co., incorporated; capital stock, \$5,000. — Hub Gore Makers purchased patent rights of new elastic-vamp shoe invented by Henry E. Rooney. — Empire Shoe Co. enlarged quarters. — E. H. Reynolds, having manufactured shoes for 39 years, decided to retire from business. — George E. Keith Co. began erection of new factory, 35 x 130 feet, three stories, for the manufacture of cheap grade of boys and youths' shoes. — Golden & Corcoran established manufacture of sporting shoes; about 20 hands employed. — Following firms shut down temporarily: George E. Keith Co., E. E. Taylor & Co., Myron F. Thomas, M. P. Clough & Co., Field-Hazard Co., Stacy, Adams, & Co., Howard & Foster, George G. Snow, Empire Shoe Co., F. M. Shaw & Son, M. A. Packard & Co., R. B. Grover & Co., Whitman & Keith, Brockton Co-operative Shoe Manufacturing Co., Churchill & Alden, and Thompson Bros. — Following firms reduced wages: George G. Snow, M. P. Clough & Co., Churchill & Alden, Ware & Lincoln, W. L. Douglas Shoe Co., T. D. Barry & Co., Hagerty & Sullivan, and E. E. Taylor & Co. — Amasa S. Glover, inventor of shoe-sewing system, died, aged 80 years. — Edge setters and trimmers at factories of Hagerty & Sullivan and E. E. Taylor & Co. struck because of reduction; Hagerty & Sullivan shut down.

August. Patent granted to Ephraim S. Morton on wire nail machine. — Mulligan & Drislane received orders for moulded box toes from England and Australia. — Whitman & Keith Co., shoe manufacturers, incorporated; capital stock, \$80,000. — George G. Snow began erection of addition to plant to be used as storehouse. — George B. Goddard, mallets, built new engine and boiler house. — Mawhinney Last Co. ran overtime. — D. W. Field purchased land for erection of new factory. — R. B. Grover & Co. shut down for two weeks. — Dexter E. Wilbur & Son removed to Holbrook. — Lasters at factory of George G. Snow struck because of reduction; firm made agreement to have lasting done by Consolidated Hand Method Lasting Machine Co.

September. Wm. H. Gray, patterns, succeeded by W. H. Gray Pattern Co. — Myron F. Thomas made arrangements for erection of new factory, 35 x 100 feet, four stories. — New firm, F. C. Kingman & Co., formed to manufacture shoes. — New factory of George E. Keith Co. completed. — T. D. Barry & Co. fitted up old factory for manufacture of cheap grade of shoes. — O'Reilly & McGrath established manufacture of shoes. — Electric forge set up at plant of Brockton Die Co. — Stacy, Adams, & Co. reduced cutting force. — Strike of lasters at factory of George G. Snow settled. — Lasters employed by Churchill & Alden struck for restoration of wages; places filled by agents of Chase Lasting Machine Co. Lasters Union 39 inaugurated a general strike of lasters against the Chase Co. because of interference in strikes. About 1,000 operatives struck affecting the following firms: M. P. Clough & Co.; Bourvé, Crawford, & Co.; Lilly, Brackett, & Co.; T. D. Barry & Co., George G. Snow, Howard & Foster, F. W. Packard & Co., Stacy, Adams, & Co., Joyce & Fletcher, Thompson Bros., Brockton Co-operative Shoe Manufacturing Co., Myron F. Thomas, Preston B. Keith Shoe Co., R. B. Grover & Co., M. A. Packard & Co., Reynolds, Drake, & Gabell, E. E. Taylor & Co., Field-Hazard Co., and J. C. Jenkins. This strike was settled by satisfactory agreement. — Finishers and sole fasteners struck for restoration of wages and to prevent the interference of Goodyear Shoe Manufacturing Co. in strikes. The following firms were affected: R. B. Grover & Co., E. E. Taylor & Co., Ware, Lincoln, & Thayer, M. P. Clough & Co., Howard & Foster, T. D. Barry & Co., Churchill & Alden, Lilly, Brackett, & Co.,

George G. Snow, Thompson Bros., M. A. Packard & Co., Joyce & Fletcher, Stacy, Adams, & Co., Kimball, Tisdale, & Baker, B. F. Reynolds, and F. E. White Co. This strike was settled in the case of R. B. Grover & Co., M. P. Clough & Co., E. E. Taylor & Co., F. E. White & Co., and Joyce & Fletcher; later given up in other factories.

October. Union Shoe Co. incorporated. — Morley Button Sewing Machine Co., Boston, Morley Finishing Machine Co., Portsmouth, N. H., owners of the Clark Ironing and Finishing Machine, and O. A. Miller, Brockton, manufacturer of treeing machines, formed Consolidated Shoe Machinery Corporation with O. A. Miller president and general manager. — Work begun on new shoe factory for Myron F. Thomas. — C. S. Pierce, box toes, shut down for repairs on boiler. — Lasters employed by E. & L. C. Kelth struck because requested to sign agreement to give firm one week's notice when intending to leave employ.

November. Patent granted to John W. Cooper on tack-pulling machine. — New style motor carriage invented by Alonzo R. Marsh. This carriage is three feet from the ground in height, propelled by means of steam and said to be capable of attaining a speed of 30 miles per hour. — Empire Shoe Co. decided to enlarge plant. — Bakery and candy factory of F. B. Washburn & Co. destroyed by fire.

December. Patents granted to George H. Ryan on shoe-turning machine and to Walter L. French on dumping wagon. — Faulkner, Crafts, & Co. established manufacture of shoes. — T. D. Barry & Co. added new machinery. — Myron F. Thomas moved into new addition to plant. — Stock subscribed towards establishment of shoe factory on co-operative plan. — Shaw & Bryant, shoes, dissolved; business continued by Linus H. Shaw. — Lasters employed by George E. Kelth Co. struck because of dissatisfaction with price list; settled.

The number of cases of shoes shipped during 1897, as compiled by the *Brockton Enterprise*, is presented in the following table in comparison with the shipments of three preceding years:

MONTHS.	1894	1895	1896	1897
January, ...	25,975	35,238	33,465	28,249
February, ...	30,591	37,006	36,110	37,417
March, ...	47,586	48,416	40,556	40,038
April, ...	39,642	42,734	42,150	49,534
May, ...	37,801	49,709	51,242	53,113
June, ...	40,187	37,370	31,681	24,991
July, ...	21,940	28,914	30,455	30,383
August, ...	38,864	43,056	33,100	39,265
September, ...	33,473	35,073	40,029	41,033
October, ...	35,861	30,915	43,787	45,678
November, ...	41,301	35,805	28,850	37,637
December, ...	30,815	20,527	22,950	34,112
TOTALS, ...	424,036	444,763	434,375	441,750

It will be seen by the above table that the shipments for 1897 were 441,750 cases as against 434,375 cases in 1896, an increase of 7,375 cases or 1.70 per cent. Shipments during past ten years were as follows:

YEARS.	Cases	YEARS.	Cases
1888, ...	422,282	1893, ...	422,053
1889, ...	433,452	1894, ...	424,036
1890, ...	469,607	1895, ...	444,763
1891, ...	429,582	1896, ...	434,375
1892, ...	423,241	1897, ...	441,750

Brookfield. In January, firm of George Mann & Bro., woollens, incorporated as Mann-Stevens Woollen Co.; capital stock, \$25,000; leased the Sagendorph Mill and began putting property in order. *February.* Quaboag Manufacturing Co. incorporated; capital stock \$80,000; to manufacture cotton and woollen goods and paper and card board. — George H. Burt & Co. removed to Lynn. *March.* Mann-Stevens Woollen Co. added new looms and started up. — Brookfield Pressed Brick Co. resumed operations. — Greyhound Bicycle Co. started up on full time. — C. H. Moulton & Co., shoes, reduced wages of treers. *May.* Pottery works of Parmenter Manufacturing Co. destroyed by fire. *June.* Winfield Scott & Co. started up mill formerly operated by Mann Bros. — Mann-Stevens Woollen Co. started up remaining portion of machinery. — E. & A. H. Batcheller Co., shoes, resumed operations. — Brookfield Cycle Co. set up new engine of 40 horse power and made arrangements for starting up plant. — C. H. Moulton & Co., shoes, ran on short time. *July.* Parmenter Manufacturing Co. decided to rebuild portion of plant destroyed by fire. — C. H. Moulton & Co. shut down for ten days. *August.* Winfield Scott & Co., woollens, added new water wheel. — Alward & Sinclair of Pater-son, N. J., leased one-half of Burt factory and began manufacture of rubber boots and shoes. *September.* Winfield Scott & Co. set up 16 new looms in factory formerly occu-pied by Rouselle & Moreau. *October.* Building formerly occupied by Bradford Yarn Co. leased by R. P. Grant for manufacture of shoddy. — J. Rouselle started up new counter factory. — Mann-Stevens Woollen Co. ran nights. — C. H. Moulton & Co. ran on 60-hour time. *November.* E. & A. H. Batcheller Co. resumed operations after temporary suspension. — J. Rouselle decided to build addition to counter factory. *December.* C. H. Moulton & Co. added new horn-pegging machine and increased force. — R. P. Grant, shoddy, began manufacture. — E. & A. H. Batcheller Co. announced reduction in wages.

Brookline. In January, patents granted to John C. Lane, electrical condenser, and to Walter R. Addicks, carburetted water gas apparatus. — Robert Bishop, cotton waste and paper manufacturer, died, aged 59 years. *April.* Patents granted to William R. Roney, fuel economizer, and to Samuel Cabot, recovering flocculent carbon; in May, to William W. Whitcome, dasher headlight; in July, to Helen A. Amen, invalid's bed; in October, to Wm. S. Burgess, recoil operated gun.

CAMBRIDGE. In January, George F. Blake Manufacturing Co., engines, began erection of new machine shop; of brick and wood, one story, 98 x 151 feet. — George L. Damon began erection of safe and vault factory; of steel and wood, two stories, 85 x 85 x 200 feet. — Patents granted to George A. Holmes, fastening for shoes, and to William E. Nickerson, automatic weighing apparatus. *February.* Patent granted to Edward Culhan, bedstead fitting. — George F. Blake Manufacturing Co. began re-moval of Knowles Steam Pump Works from Warren to this place. — Strike occurred among moulders at iron foundry of Barbour-Stockwell Co. *March.* Patents granted as follows: Arthur H. Jelly, fender for cars; George A. Parmenter, life guard for street cars; and Thomas Haley, hose strap and spanner. — Portion of plant of George W. Gale Lumber Co. destroyed by fire. *April.* Patents granted to Benjamin F. Mills, check-perforating machine, and to Miner C. Cone, plow. *May.* Patents granted to Arthur M. Comey and H. G. Parker, recording thermometer; to David E. Hunter, adjust-able support for books; and to Robert Cowen, apparatus for manufacturing pneumatic tires. *June.* Alvan G. Clark, lens maker, died. *July.* Patent granted to George M. Stevens, bell-striking mechanism. — Factory of Keeler & Co., furniture, damaged by fire. *August.* Patents granted to William P. O'Connor, shelf for bakers' ovens; Edwin D. Clapp, electrically operated loom; and Frank Coffin, indicator for lathes or planers; in September, to Howard F. Eaton, municipal signal system; in October, to Robert Cowen, woven tire. — Benjamin P. Clark, retired confectionery manufacturer, died, aged 81 years. — Plant of A. H. Hews & Co., pottery, damaged by fire. *Novem-ber.* Patents granted to George Skinner, awning frame, and Gustavus R. Alden, port-able book rack. — Irving & Casson, furniture, began erection of new factory building; of brick and stone, 60 x 50 feet, four stories. *December.* Patents granted to George A. Parmenter and S. H. Pierce, track cleaner for street railways, and Maurice B. Peugnet, electric motor. — Building of Riverside Press (Houghton, Mifflin, & Co.) damaged by fire. — Brick manufacturing plant of Martin W. Sands destroyed by fire.

Canton. In March, Lexington Print Works resumed operations. — Patent granted to Theodore H. Lewis on machine for cutting mortises for hinges in doors and door jams. *June.* Eureka Silk Co. reduced to three-quarter time; in July, suspended for stock taking. *August.* Kinsley Iron & Machine Co. started up plant on full time after

shutdown of six weeks. *December.* American Net & Twine Co. shut down plant permanently after running for more than forty years.

Charlton. In April, plant of Chauncey W. Pike, woollens, destroyed by fire; to be rebuilt with increased capacity. *June.* Plant of Akers & Taylor damaged by accident to engine.

Chelmsford. In March, George C. Moore, wool scourer, decided to enlarge plant; in May, raised roof of portion of plant and began erection of two new structures; completed in December. *June.* Patent granted to Charles F. Fellows, cartridge loading device, and to John Bradley, knock-off mechanism for knitting machines.

CHELSEA. In January, J. Arthur Towle Shoe Co. incorporated; capital stock, \$10,000. *March.* Patents granted to Harry A. Bower, support for drums, and to James W. Poole, switch box for flush switches. *April.* Chelsea Cordage Co. shut down. *May.* Patents granted to Thomas M. Taylor and J. B. Wright on dress guard for bicycles and to Frederick J. List on car fender. — Planing mill of T. H. Buck & Co. damaged by fire. *June.* Patent granted to Jeremiah Campbell on apparatus for hoisting and conveying. *July.* Abbott S. Rogers Shoe Co. decided to erect new factory. *August.* Patent granted to Henry K. Porter on bicycle stand. — Plant formerly operated by Boston Rubber Co. leased by L. C. Chase & Co. for the manufacture of bicycle tires. *September.* Patent granted to Daniel R. Porter on horseshoe guard. — Planing mill of Thomas L. Appleton damaged by fire. *October.* About 18 glassers employed by Magoun Leather Co. struck because of employment of a foreigner at reduced wages. *November.* Patent granted to John W. Ricker on washing machine. — Oil works of Joseph D. Loftus & Co. destroyed by fire.

Cheshire. In April, Oakman Manufacturing Co. decided to establish manufacture of electrical insulators and glass novelties; in May, work of putting plant in repair begun. *July.* Factory of Cheshire Shoe Co., occupied by H. C. Bowen & Son as grist mill and storehouse, destroyed by fire. *December.* C. Obst Odell & Co. leased building to establish soap factory.

Chester. In September, Chester Co-operative Granite Co. organized; purchased tools of old company, Hudson & Chester Granite Co., and began operations on unfinished orders of the latter. *December.* Hampden Emery & Corundum Co. purchased land for improvement.

Chesterfield. In January, Thayer Bros. built addition to saw and grist mill. *February.* William T. Bartlett, baskets, ran on full time. *December.* Co-operative company organized to manufacture pearl buttons; capital stock, \$1,500.

CHICOPEE. In January, Dwight Manufacturing Co., cottons, increased fire protection and ordered spinning frames. *February.* Strike occurred at plant of Stevens Arms & Tool Co. *May.* Overman Wheel Co. ran nights. — Lamb Manufacturing Co., machinery, increased force. *June.* Dwight Manufacturing Co. shut down its several mills alternate weeks in order to curtail production. *July.* Patent granted to Joseph R. Harrison on skate. — Stevens Arms & Tool Co. ran overtime. — Chicopee Manufacturing Co., cottons, set up new machinery and equipped plant for electric lighting. — Boycott against goods of Overman Wheel Co. removed, and lockout declared by company against union workmen ended. *August.* Dwight Manufacturing Co. shut down two mills each week in order to curtail production. — Chicopee Manufacturing Co. shut down on account of dull trade. *September.* Patent granted to Charles C. Candy on handle bar for bicycles. — Overman Wheel Co. purchased plant for manufacturing cork grips and removed it from Winsted, Conn., to this place. — Chicopee Manufacturing Co. replaced old machinery by new and resumed operations after shutdown of three weeks. *October.* Stevens Arms & Tool Co. set up new boiler of 125 horse power. *November.* Patent granted to Sylvester B. Hill on bicycle frame. *December.* Plant of Ames Manufacturing Co. advertised for sale. — Taylor, Bramley, & Co., knit goods, shut down for inventory. — Overman Wheel Co. shut down indefinitely.

Clarksburg. In January, Linwood Woollen Mills made improvements and added machinery; in March additional machinery added; in July shut down for two weeks; in September shut down for repairs.

Clinton. In January, Lancaster Mills, gingham, made improvements in plant. — Bigelow Carpet Co. increased force. — William A. Fuller, lumber, added cross-compound engine, 125 horse power. *March.* Lancaster Mills substituted 500 new looms for old ones. *April.* Clinton Batting and Absorbent Cotton Co. sold plant to new company to be known as Leominster Cotton Co.; arrangements made for removal of plant to Leominster. *May.* Clinton Worsted Co. ordered new machinery. — Plant of J. B. Parker Machine Co. purchased by Clinton Wire Cloth Co. — Bigelow Carpet Co. ran to fullest capacity. *June.* Samuel Booth purchased patterns and leased buildings of J. B. Parker Machine Co.; business continued under name of Samuel Booth & Co. — Metropolitan Water Board began removal of dam at Lancaster Mills. — *July.* Bigelow Carpet Co. shut down on account of over production; in August, resumed operations. *August.* Lancaster Mills shut down because of low water. *September.* Plans made for erection of new boiler house, 104 x 130 feet, one story, at Lancaster Mills. — Clinton Wire Cloth Co. reduced wages in netting cloth department. *October.* Foundation for new chimney and engine house at Lancaster Mills completed. — About 60 weavers employed by Clinton Worsted Co. struck for increase in wages and plant shut down; later, settled by compromise and work resumed. *November.* Worsted mills of Bigelow Carpet Co. shut down indefinitely. — Samuel Booth of Samuel Booth & Co., woollen machinery, died, aged 54 years. *December.* Lancaster Mills ordered new machinery. — Bigelow Carpet Co. made plans for erection of new warehouse. — Sterling Worsted Co. organized to manufacture fancy worsted goods; capital stock, \$30,000; contract for mill awarded and work on foundation begun.

Colrain. In December, No. 2 mill of Griswoldville Manufacturing Co., cottons, damaged by explosion.

Concord. In March, patent granted to Oliver C. Burr on combined bobbin holder and thread catcher; in September, to Charles W. Grant on railway signal.

Conway. In July, Edward Delabarre, retired woollen manufacturer, died, aged 75 years. *September.* Electric Light and Power Co. organized.

Cummington. In January, William L. Chilson started up new turning mill. *August.* Mill of L. L. Brown Paper Co. shut down for repairs.

Dalton. In March, Hampden Woollen Co. leased plant preparatory to removing business from Hampden to this place; in April, demolished boiler house in order to erect new one of brick, 38 x 45 feet, two stories; in May, added new water wheel. *June.* Patent granted to Seymour Crane on stamp-cancelling machine. — Byron Weston Paper Co. arranged for erection of office building, 30 x 40 feet, one story. — Hampden Woollen Co. started up plant. — Old Berkshire Mills Co., paper, shut down for one week. *August.* Patent granted to Adoniram J. Walker on hub-attaching device. — Byron Weston Paper Co. shut down two weeks for repairs. — *October.* Dalton Shoe Co. ran overtime.

Danvers. In January, patent granted to Ralph O. Hood on electric arc light. *February.* Cross & Murphy, morocco, started up after shutdown. *March.* Eaton & Sears shoe factory, partly occupied by Walter T. Martin, shoes, destroyed by fire. — Shoe factory of W. H. Burns damaged by fire. *May.* Shoe factory formerly occupied by Joseph L. Jellerson & Co. leased to Murphy Bros of Lynn. — John A. Sears, retired shoe manufacturer, died, aged, 82 years. *August.* Plant of Danversport Rubber Co. destroyed by fire; in September, plans made for rebuilding; main building, 78 x 94 feet, with addition, 38 x 54 feet; and engine house, 25 x 88 feet; in October, work begun and completed in November. *November.* Charles L. Elliott, shoes, leased factory in Beverly for removal of business to that place. *December.* Necktie factory of W. H. Cooke & Co. and shoe factory of Walter T. Martin & Co. damaged by fire.

Dedham. In January, J. Edward Cochrane made improvements in water service at Norfolk Mills, carpets, and erected new weave shed, 40 x 60 feet. *April.* Spinners of Merchants Woollen Co. struck for increase in pay.

Dighton. In August, Mount Hope Thread Mill started up and ran overtime.

Douglas. In February, American Axe and Tool Co. resumed operations; in June, polishers struck because of dissatisfaction with prices on special work. *July.* Wm. E.

Hayward & Co., woollens, resumed full time after long period on short time; in October, began erection of storehouse, 40 x 100 feet.

Dover. In June, F. A. Brown began erection of paper mill.

Dracut. In January, Michael Collins, woollens, started up on line of samples after shutdown. *March.* Brennan Bros. established manufacture of shoes. — Woollen plant of Michael Collins incorporated as Collinsville Mills; in June, shut down; resumed operations in August. *July.* Patent granted to Alberto Smithson on cash register and indicator. *November.* Brennan Bros. added machinery and increased force.

Dudley. In April, William J. Warren, paper manufacturer, died, aged 67 years. — Stevens Linen Works began erection of new bleachery.

East Bridgewater. In June, patent granted to William C. Baxter on hoisting apparatus. — Construction of street railway between East Bridgewater and Brockton begun. *December.* Patent granted to Benjamin W. Bennett on mechanical movement.

Easthampton. In March, Williston & Knight Co., buttons, shut down on account of accident to engine. — Glendale Elastic Fabric Co. decided to enlarge plant. *April.* Easthampton Spinning Co., cottons, shut down for installation of new engine of 500 horse power. *July.* Glendale Elastic Fabric Co. built addition to plant. *September.* Ezra T. Sawyer, president of Easthampton Rubber Thread Co., died, aged 68 years. *December.* Stock of Easthampton Spinning Co. damaged by bursting of water pipes.

Easton. In February, Hatch & Perry, shoes, dissolved; succeeded by Hatch & Grinnell. *April.* Work begun on addition to shoe factory; to be occupied by T. D. Barry & Co. of Brockton. *May.* Patent granted to Alfred B. Morse on winding apparatus. *July.* Oliver Ames & Sons Corporation, agricultural implements, ran on short time. *December.* Hatch & Grinnell shut down for stock taking.

Enfield. In May, Enfield Manufacturing Co., woollens, made improvements. — Woods & Ward began erection of new box factory, 40 x 100 feet, 2½ stories.

Erving. In May, Noah Rankin made repairs at box factory. *June.* Washburn & Heywood Chair Co. shut down for stock taking; in November, ran on reduced time.

Essex. In March, Charles S. Marston retired from Essex Shoe Co., in April, plant shut down. *December.* Hickey & Story made repairs on plant preparatory to starting manufacture of heels.

EVERETT. In January, patent granted to James A. Swanson on tourist's bicycle bag. *February.* Cochrane Chemical Co. began erection of new factory building; of wood, 48 x 52 feet, one story. — Patents granted to Norman T. Mills on bicycle bell and to Leander B. Cobb on adjustable support for school furniture. — Factory of McCune Cycle Co. damaged by fire. *May.* Patent granted to Stephen Snow on lasting machine; in June, on machine for numbering shoes. *June.* Patent granted Gustaf A. Johnson on ice velocipede; in July, to Charles B. Bosworth on pressure gauge tester and safety valve. *August.* C. M. Bearce began erection of factory for woodwork; of wood, 40 x 50 feet, two stories. — L. C. Norton began erection of machine shop; of wood, 50 x 175 feet, one story. *November.* Patent granted to Thorsvald Hansen on thread-winding machine.

FALL RIVER. In January, patent granted to Jean B. Daubelin on lamp burner. — Accident to engine at Merchants Mills caused a brief suspension. — Following cotton manufacturing corporations agreed to reduce running time to 42 hours per week from February 1 to May 1, in order to curtail production: American Linen, Annawan, Barnard, Border City, Bourne, Chase, Cornell, Durfee, Fall River Manufacturing, Flint, Granite, Mechanics, Merchants, Metacomet, Pocasset, Richard Borden, Robeson, Sagamore, Shove, Slade, Stafford, Tecumseh, Troy, Union, Wampanoag, and Weetamoe. — Dust room of Pocasset Manufacturing Co. damaged by fire. — Strike occurred among weavers in Granite Mill No. 3.

February. Agreement for curtailment of production went into effect. — Changes and improvements made in Granite Mill No. 1. — American Printing Co. ran overtime. — Sanford Spinning Co. and Globe Yarn Mill No. 3 shut down for several days. — Jesse Eddy Manufacturing Co., woollens, decided to shut down for several weeks. — Durfee Mills shut down for two weeks; improvements made in boiler house. — Strike occurred

at Hargraves Mill No. 2; mill shut down indefinitely. — Plant of Eagle Stove Foundry Co. damaged by fire.

March. Patents granted to John Sullivan, compressor roll for cotton slashers; to Andrew Luscomb, shuttle-box mechanism; and to John O. Eaton, automatic-feeding device for cigarette machines. — Kelly Shoe Co. moved into new quarters. — Shutdown for curtailment of production continued according to agreement. — Following corporations added new machinery: Granite Mills, American Linen Co., and Pocasset Manufacturing Co. — Stock subscribed for erection of new cotton mill. — Ground broken for erection of new weave shed by Shove Mills. — Robeson Mills resumed operations after shutdown of eight months. — Durfee Mill No. 2 resumed operations after shutdown of several weeks; new boilers set up and improvements made in engine. — American Printing Co. ran overtime; later shut down for several days on account of accident to engine. — Hargraves Mill No. 2 resumed operations with new set of operatives.

April. Ground broken for erection of new cotton mill of 50,000 spindles; to be known as the Arkwright Mill. — Shove Mills increased the height of chimney and added picking machinery. — American Linen Co. shut down for one week on account of a broken shaft. — Patents granted to Jacob F. Geb on automatic combined alarm and stop mechanism for carding machines and to Timothy Mooney on loom. — Several mills shut down according to curtailment agreement. — Fall River Bleachery damaged by fire. — Weavers employed in Hargraves Mill No. 2 struck.

May. Arkwright Cotton Manufacturing Co. organized; contract let for new mill. — Union Cotton Manufacturing Co. ordered new machinery. — Granite Mills added new machinery. — Fall River Ice Co. purchased land for erection of new buildings. — King Philip Mills shut down portion of plant on account of lack of orders. — Kerr Thread Co. shut down for a few days and Chace Mills suspended temporarily on account of a break-down in machinery. — Several corporations suspended according to curtailment agreement. — Plant of Fall River Machine Co. damaged by fire. — Strike of weavers at Hargraves Mill No. 2 declared off.

June. Erection of new Arkwright mill begun; 127 x 395 feet, four stories, engine room 78 x 79 feet, and chimney 200 feet high. — Parker Mills ran nights. — Shove Mills added machinery. — Sagamore Manufacturing Co. ordered new machinery; shut down for one week and resumed. — Patents granted to Edward H. B. Brow on bicycle lock and to Andrew F. McCann on loom gear.

July. Kerr Thread Co. resumed operations. — Algonquin Printing Co. started up after shutdown of several weeks. — Fall River Iron Works Co. and Cornell and Tecumseh Mills made arrangements for experimenting with the new vertical high speed loom. This loom was distinguished from other looms in general use by having a vertical instead of horizontal lathe. — Bourne Mills decided to continue system of profit sharing for next six months. — Double-time schedule at Parker Mills discontinued. — Shove Mills installed electric lighting plant. — Following mills added new machinery: Merchants, Parker, Shove, and Sagamore. — American Printing Co. shut down for stock taking and repairs. — American Linen Co. and Durfee Mill No. 3 shut down for repairs. — Portion of machinery stopped at Shove Mill No. 1, Hargraves No. 3, and Granite No. 2. — Wampanoag and Robeson Mills shut down for one week. — Fall River Iron Works Co. shut down indefinitely; 3,000 hands affected. — Following mills decided to curtail production on account of depression in trade: Chace, Merchants, Richard Borden, Robeson, Sagamore, Stafford, Stevens, Tecumseh, Wampanoag, and Weetamoe.

August. Patent granted to Philip F. Leary on metallic packing for the cylinders of steam engines. — Arkwright Mills incorporated for the manufacture of cotton goods; capital stock, \$200,000. — Jesse Eddy Manufacturing Co., woollens, resumed operations after shutdown of several months. — Fall River Iron Works Co. added seven new boilers. — Remaining pairs of mules removed from Shove Mill No. 1 and ring spinning frames set up instead. — Improvements made at Parker Mills. — Following mills resumed after shutdown for curtailment: Sagamore, Stevens, Stafford, Pocasset, Wampanoag, Weetamoe, Merchants, Richard Borden, Robeson, Fall River Manufactory, and Iron Works. — Chace Mills added new engine; shut down for one week. — Maplewood Mills, absorbent cotton, shut down on account of accumulation of stock.

September. Patents granted to John C. Judge, spinning frame; to J. A. Rousseau, unpuncturable tire; and to Alfred D. Chandler, yarn separator for spinning machines. — Kerr Thread Co. began manufacture of new product resembling silk yarn, to be known as silkent yarn. — Stock subscribed for establishment of new hat factory. — Efforts made to establish new plant for manufacture of absorbent cotton. — Border City Manufacturing Co. set up five new boilers. — American Linen Co. and Shove Mills added new machinery. — American Printing Co. began construction of new chimney, 120 feet

high, and ran overtime.—Fall River Bleachery awarded contract for enlargement of plant.—Accident to machinery at Granite Mill No. 2 caused shutdown for repairs; resumed after one week's idleness.

October. Patent granted to William E. Sharples and Fernando E. J. Snell on protecting cover for carding machines.—Benjamin F. Covel of Covel Machine Co. applied for patent on elevator with new style safety device.—American Printing Co. and Sagamore Manufacturing Co. added new boilers.—Troy Cotton & Woollen Manufacturing Co. decided to make improvements in plant.—Fall River Bleachery began erection of addition, 75 x 140 feet, two stories.—Kerr Thread, Globe Yarn, and Hargraves Mills ran overtime.—Stafford Mills reset certain mules preparatory to putting them in operation after long idleness.—Durfee Mills added new looms.—J. H. Estes & Son, twine, and Jesse Eddy Manufacturing Co., woollens, made improvements in plant.—Fall River Gas Works Co. built new gasometer of 750,000 cubic feet capacity.—Several spinners at plant of Jesse Eddy Manufacturing Co. struck because of alleged under payment.—Picking room of Shove Mill No. 1 damaged by fire.

November. Patents granted to Albert A. Sweet on picker and to William H. Thomas on machine for manufacturing hat linings.—Pocasset Hat Co. organized; capital stock, \$60,000; contract for factory awarded; 40 x 100 feet, three stories, with ell, 50 x 75 feet.—Erection of new chimney completed at plant of American Printing Co.—Sagamore Mill No. 2 resumed operations after shutdown of four weeks for installation of new engine.—Work begun on new cotton shed for Fall River Iron Works Co.—New machinery set up in Shove Mill No. 1.—Stevens Manufacturing Co. awarded contract for addition to mill.—Daval Mills added new engine.—American Printing Co. reduced running time one hour.—Chace Mills announced stoppage of 100 looms for indefinite period because of lack of orders.—Robeson Mills shut down because of dull trade.

December. Patents granted to John A. Collins on roving can and to Edward Whittum on thread guide for spinning machines.—Arkwright Mill completed and machinery set up.—Shove Mills added new weave shed.—Fall River Iron Works Co., American Linen Co., and Shove Mills added new machinery.—Jesse Eddy Manufacturing Co. advanced wages.—Steps taken towards formation of stock company to erect brewery.—Parker and Hargraves Mills ran overtime.—American Printing Co. shut down for a few days.—Carding room at Hargraves Mill shut down one week for repairs.—Cotton manufacturers announced a reduction in price of weaving a cut of 24-inch, 64 x 64 print cloth from 18 to 16 cents, and in all other departments, including salaried employes, a reduction equivalent to 11½ per cent, to take effect, January 1, 1898.—Kerr Thread Mill damaged by explosion.—Fires occurred as follows: Towel factory of Charles T. Priest, storehouse of Granite Mill No. 2, picker room at Union Mill, and weave room at Davol Mill.

The annual cloth statement issued by Clinton V. S. Remington, for 1897, showed a production of 10,648,000 pieces, an increase as compared with 1896, of 593,000 pieces, or 5.90 per cent. Sales for the year were 10,470,000 pieces, of which 7,616,000 pieces were "odd" and 2,854,000 pieces were 64 x 64s. This shows an increase, as compared with 1896, of 2,651,000 pieces, or 33.90 per cent. There were 1,144,000 pieces sold for future delivery as against 1,001,000 pieces in 1896, an increase of 143,000 pieces, or 14.28 per cent. The average price paid during the year was .02484; the highest, .02688; and the lowest, .02250. The following table shows production and sales since 1891:

CLASSIFICATION.	NUMBER OF PIECES OF PRINT CLOTH						
	1891	1892	1893	1894	1895	1896	1897
Total production, .	9,985,000	10,045,000	9,065,000	8,478,000	11,090,000	10,055,000	10,648,000
Sales:							
Odd, ...	4,423,000	5,547,000	4,245,000	5,062,000	6,576,000	5,668,000	7,616,000
60 x 56, ...	125,000	173,000	—	—	—	—	—
64 x 64, ...	4,290,000	5,039,000	2,874,000	3,269,000	3,295,000	2,151,000	2,854,000
On hand at close of year, ...	90,000	7,000	142,000	140,000	287,000	1,802,000	1,836,000
Stock in United States at close of year, .	278,000	9,000	340,000	211,000	464,000	2,300,000	2,390,000
Sold for future delivery,	1,375,000	2,850,000	950,000	1,300,000	1,125,000	1,001,000	1,144,000

In order to show the production of print cloth by months, the following table is introduced, in which is given the number of pieces produced during each month in each of the years specified :

MONTHS.	NUMBER OF PIECES OF PRINT CLOTH PRODUCED IN FALL RIVER DURING EACH MONTH SPECIFIED IN —						
	1891	1892	1893	1894	1895	1896	1897
January, . . .	1,000,000	920,000	720,000	770,000	830,000	870,000	1,035,000
February, . . .	800,000	780,000	750,000	800,000	880,000	1,100,000	860,000
March, . . .	790,000	790,000	780,000	1,010,000	1,100,000	860,000	550,000
April, . . .	770,000	965,000	945,000	800,000	820,000	835,000	868,000
May, . . .	1,000,000	790,000	760,000	840,000	880,000	1,150,000	920,000
June, . . .	750,000	765,000	730,000	990,000	1,050,000	880,000	865,000
July, . . .	770,000	950,000	905,000	740,000	840,000	530,000	1,005,000
August, . . .	970,000	760,000	530,000	625,000	1,100,000	465,000	740,000
September, . . .	730,000	725,000	585,000	63,000	810,000	560,000	875,000
October, . . .	950,000	950,000	720,000	175,000	880,000	1,115,000	1,150,000
November, . . .	730,000	730,000	760,000	745,000	1,060,000	865,000	875,000
December, . . .	725,000	920,000	880,000	920,000	840,000	805,000	1,105,000
TOTALS, . . .	9,985,000	10,045,000	9,065,000	8,478,000	11,090,000	10,055,000	10,648,000

Falmouth. In January, patent granted to John D. Blagden on rotary gas engine.

FITCHBURG. In February, Star Worsted Co. decided to build addition to mill, 50 x 70 feet. *May.* Fitchburg Worsted Co. made plans for addition; of brick, 36 x 113 feet, two stories. *June.* Fitchburg Gas and Electric Light Co. erected new condensing house; of brick, 30 x 40 feet, one story. — Lovell Williams, retired chair manufacturer, died, aged 82 years. *July.* Patent granted Charles H. Cowdrey on machine for shaping wooden rings. — Fitchburg Steel Ball Co. formed to manufacture steel balls for bearings by new process. — Beoll Mills, woollens, shut down weaving department for two weeks. — W. M. Orswell, president of Orswell and Nockege Mills, died in Providence, R. I. *August.* Fitchburg Worsted Co. ran overtime and Grant Yarn Co. ran portion of plant nights. *September.* Patent granted to Albert A. Holt on vehicle running gear. — Orswell Mills, cottons, resumed full time. — Plant of Colburn Electric Manufacturing Co. offered for sale. *October.* Parkhill Manufacturing Co., cottons, started up Mill B; about 120 additional weavers were employed. — Grant Yarn Co. made plans for addition to plant 50 x 70 feet, 3 stories; in November, work began. *December.* Patent granted to John F. Dustin on loom and on box-motion operating device for looms.

Foxborough. In September, plant of Foxborough Foundry & Machine Co. destroyed by fire; in December, began erection of new plant. *December.* Van Choate Electric Co. ordered tools and machinery.

Framingham. In March, Rubber-Soled Leather Shoe Co. of Boston purchased idle plant of Tripp Manufacturing Co. for establishment of business in this place; also purchased additional land for enlargement of plant. — Strike at shoe factory of Gregory, Shaw, & Co., in progress since November, 1896, declared off. *July.* Bay State Manufacturing Co., leather goods, set up new engine. *November:* Dennison Manufacturing Co., of Boston, paper goods, started up portion of plant in this place. *December.* Patent granted to Oscar H. Ordway on machine for twisting wood.

Franklin. In January, Erickson & Stewart, straw goods, succeeded by Stewart & Co. and business started up. — H. T. Hayward, woollens, resumed operations after a shutdown five weeks. *February.* Ray's Woollen Co. started up after shutdown of several weeks. *May.* Patent granted to Jacob Geb on automatic alarm and stop-mechanism for carding machines. — Norfolk Woollen Co. added new engine. *June.* Waite Felting Co. ran nights. — H. T. Hayward shut down. *July.* Waite Felting Co. installed new boilers and cards and ran nights. *September.* Franklin Knitting Co. decided to

enlarge plant. *October.* Patent granted Jacob F. Geb on card-feeding machines. *November.* International Lard & Oil Refining Co. of New York purchased unoccupied beet-sugar factory for purpose of establishing new industry. — Ray's Woollen Co. added machinery and began erection of new addition. — Mill of Franklin Knitting Co. damaged by fire. *December.* Ray's Woollen Co. enlarged plant and added machinery.

Gardner. In January, patent granted to Martin V. B. Howe on vehicle hub attachment. — Gardner Woodenware Manufacturing Co. organized to manufacture wooden goods and toys; capital stock, \$50,000. *February.* Heywood Bros. & Co., chairs, combined with Wakefield Rattan Co. under name of Heywood Bros. and Wakefield Co.; capital stock, \$6,000,000. *June.* Patent granted to Frederick T. Russell on door check and spring. *July.* Heywood Bros. and Wakefield Co. resumed operations after temporary shutdown. — Patent granted to Milton M. Favor on shaft-supporting device for vehicles. *August.* Patent granted to Edward G. Watkins on needle for weaving cane fabrics; in October, to Martin V. B. Howe on embossing machine; in December, to William H. Wilder on oil stove.

Georgetown. In January, A. B. Noyes & Co. and George W. Chaplin & Co., shoes, resumed operations after shutdown. *March.* Pentucket Shoe Co. began enlargement of plant; completed in June. — George W. Chaplin of George W. Chaplin & Co., died, aged 87 years. Mr. Chaplin had been engaged in the manufacture of shoes continuously for 62 years. *May.* Box factory of Willard C. Hardy destroyed by fire. *June.* Georgetown Boot & Shoe Co. added new machinery. — Preble & Co., shoes, resumed full time. *July.* Pentucket Shoe Co. added new machinery. — George W. Chaplin & Co. shut down for a few days. — Shoe factories of A. B. Noyes & Co. and Georgetown Boot & Shoe Co. started up on full time. — Box factory of Willard C. Hardy completed and started up. — George J. Tenney, retired shoe manufacturer, died, aged 92 years. *September.* Byfield Woollen Mills of Newbury purchased Pentucket mill privilege for purpose of erecting new plant. — Pentucket Shoe Co. ran overtime. — Shoe factory of Preble & Worth shut down one week for repairs; firm dissolved by withdrawal of Charles Preble; business continued by Worth. — Charles Preble purchased land for erection of new factory; in October, work begun; 40 x 80 feet, two stories. *November.* W. C. Hardy, boxes, shut down to equip plant with steam apparatus. — A. B. Noyes & Co., Pentucket Shoe Co., and Georgetown Boot & Shoe Co. shut down for a few days. *December.* A. B. Noyes & Co. added new machines and reduced wages. — P. & W. Cushion Sole Shoe Co. shut down.

GLOUCESTER. In March, patent granted to Charles H. Richardson on ship's steering apparatus. — Machine shop of A. P. Stoddart & Co. destroyed by fire. *August.* Plant of Merchant Box & Cooperage Co. destroyed by fire. *November.* Patent granted Isaac W. Dearing on lime-burning furnace.

Grafton. In February, J. S. Nelson & Son Shoe Co. ran overtime. *May.* Patent granted to Edwin B. Story on shoe form. *July.* Finlayson, Bousfield, & Co., linen thread, made repairs. *August.* Saunders Cotton Mill resumed full time. *September.* Farnumville Cotton Mills leased by A. G. Kempton of Farnumville and J. M. Harvey of Woonsocket, R. I.; repairs made; started up in October. — S. A. Forbush, shoes, shut down indefinitely; resumed operations in November. *December.* Patent granted to Stephen A. Leavens, James M. Harvey, and Walter A. Chandler on loom for lappel weaving. — S. A. Forbush added new machines and reduced wages. — Farnumville Cotton Mills made reduction in wages.

Granville. In May, Noble & Cooley decided to build addition to drum factory. *June.* Patent granted to Orville R. Noble on whistle drum. *July.* Holcomb Bros., sewing machines, shut down temporarily. *November.* Noble & Cooley ran overtime.

Great Barrington. In January, Endrick Woollen Co. resumed operations after shutdown of several weeks. *February.* Riverdale Mills, cottons, added new looms. *June.* Endrick Woollen Co. suspended operations; in July, set up new looms. *September.* Riverdale Mills added new boller. *October.* Patent granted to William Stanley, Jr., on alternating current electric motor. *November.* Endrick Woollen Co. resumed full time in all departments. *December.* Patent granted to Edwin A. Leland on locomotive for towing canal boats. — Stanley Instrument Co. organized; capital stock, \$75,000.

Greenfield. In April, patent granted to Dexter W. Goodell on thread controller for sewing machines. *May.* Goodell Bros. completed arrangements for manufacture of improved hack and power saw blades for sawing metal. *July.* Lasters employed by Cutler, Lyons, & Field, shoes, struck for an increase in prices. *October.* Patent granted James F. Dunnigan on flower holder for bicycles; in November, on clamp for bedsteads. *November.* Matthew Chapman, founder of American cutlery industry, died, aged 83 years. — Factory of Warner Manufacturing Co., cutlery and baby carriages, destroyed by fire; to be rebuilt; new quarters leased and work resumed. *December.* Wells Bros. & Co. made arrangements for purchase of plant of Granite State Mower Co., manufacturers of lawn mowers.

Groveland. In May, patent granted to Edward McCormick on waste-end disposer. *August.* Groveland Mills, woollens, shut down for repairs.

Hampden. In March, Hampden Woollen Co. leased plant in Dalton; in June removed business to that place. *July.* Hampden Woollen Mills Co. succeeded Hampden Woollen Co. and started up plant. *December.* Stockhouse belonging to Hampden Woollen Mills Co. destroyed by fire.

Hanover. In May, patent granted to Charles B. Russell on tack or nail marking machine. *October.* E. Phillips & Sons, tacks, purchased shoe factory at Whitman. *November.* C. A. Mann, shoes, resumed operations.

Hanson. In October, patent granted to Emery H. Bryant on switch mechanism.

Hardwick. In January, George H. Gilbert Manufacturing Co., woollens, resumed full time; in May, reduced wages; in November, added machinery and erected building, 14 x 33 feet, for cold storage process purposes; in December, added new engine of 250 horse power.

Harvard. In March, Boston Paving Co. made arrangements for erection of mill in this place. *May.* Safety Egg Carrier Co. removed to Templeton. — *June.* S. H. Houghton established manufacture of berry boxes, crates, etc.

HAVERHILL. In January, J. C. Dow & Co., shoe tips, moved into new quarters. — Hazen L. Goodrich admitted partner in firm of H. B. Goodrich & Co., shoes; no change in style. — John W. Russ, shoes, admitted as partners, W. W. Russ and H. D. Fogg; style changed to John W. Russ Co. — Wilbur H. Davis & Co., shoes, dissolved. — Following firms damaged by flood: F. M. Hodgdon and J. C. & G. E. Kimball, shoes, and C. H. Hayes, paper boxes. — Haverhill Paper Co. started up three machines on full time.

February. Patent granted to Harold A. Webster on buffing or polishing machine, and to Harold F. Blake on pinking machine. — Webster & Tabor, shoes, leased larger quarters in order to increase production. — Millay Last Co. of Hudson leased factory for establishment of portion of business in this city. — Improvements made at factory of John W. Russ Co. — F. A. Cheney, heels and rands, removed to new quarters. — L. Johnson & Son, shoes, sold plant to H. P. Williams. — Chick Bros., W. W. Spaulding, and J. H. Winchell & Co., shoes, reduced force. — Strike occurred at shoe factory of Thayer & Maguire; settled by arbitration. — Strike occurred at hat factory of Gilman Bros.; settled.

March. Plans made by Gale Shoe Manufacturing Co. for erection of addition to factory, 40 x 50 feet, six stories. — Chase & Laubham, power, decided to erect shoe factory. — Plans made by capitalists for erection of four new factories with electric lighting and power plant for shoe manufacture. — John W. Russ Co. reduced force and shut down temporarily for stock taking. — Haverhill Paper Co. removed to New Hampshire.

April. F. S. & H. H. Gage, shoes, added new Goodyear welt machinery. — Davis Bros. moved into new quarters. — Sleeper & Prescott, shoe tips, dissolved; new firm, Foster & Prescott formed. — Tip manufacturers agreed to close on Saturday afternoons from May 1 to September 1.

May. Messrs. French, Connor, & Proctor formed partnership for purpose of manufacturing shoes. — Levi M. Hall, paper boxes, sold out business to Ernest L. Wood &

Co. — J. H. Murray & Co., shoes, moved into new quarters. — Webster & Tabor leased new factory. — H. C. Sargent, shoes, discontinued. — Tilton, Hilliard, & Smith, shoes, sold out. — Chandler & Burnham, shoes, dissolved; business continued by C. N. Chandler. — Machinery placed in new woodworking plant of L. C. Ring.

June. Work begun on addition to plant of Gale Shoe Manufacturing Co. — Blake Pattern Co. added new last. — Carter, Ayer, & Co. removed embroidery factory from New Hampshire to this place. — T. S. Ruddock & Son shut down for stock taking. — J. S. Titcomb, patterns, and Webster & Tabor, shoes, moved into new quarters. — O. S. Currier, boxes, and Webster & Tabor began closing at noon on Saturdays. — H. B. Goodrich & Co., shoes, shut down partially on account of lack of orders. — H. C. Sargent, shoes, sold out business on account of ill health. — Hickey & Marcotte, cut soles, dissolved; business continued by M. J. Hickey. — A. E. Fernald & Co., shoes, dissolved; Fernald Bros. continued. — Daniel J. Howard, formerly engaged in shoe business, died. Employés of W. B. Thom & Co., hats, struck for advance in wages.

July. Patent granted to J. W. Evans on jack screw or lifting jack. — Perley Weeks, shoes, began erection of new factory. — Chesley & Rugg, shoes, added new machinery. — H. B. Goodrich & Co., shoes, added new elevator and automatic sprinklers. — Croston & Proctor, heels, shut down for stock taking. — J. H. Winchell & Co. reduced wages in stitching room. — D. B. Cluff & Son, shoes, dissolved. — Arthur E. Fernald & Co., shoes, sold out. — Morse Bros., shoes, dissolved; business continued by L. K. Morse. — John N. B. Green, boxes, retired from business; plant sold to Charles W. Smith. — Decatur H. Bennett of Bennett & Co., shoes, died, aged 73 years. Mr. Bennett had been engaged in shoe manufacture for 50 years.

August. Dow & Tilton established manufacture of shoes. — Alexander Hudson of Hudson Bros., heels, invented machine for scraping spring heels. — Plans made for erection of grain elevator; of brick, 40 x 130 feet, two stories. — Joseph Moyer & Son established manufacture of cornice work. — S. W. Lakin and others introduced new style of heel with machinery to manufacture the same. — Frederic K. Brooks, shoes, retired from business. — Thos. S. Ruddock & Son, shoes, leased enlarged quarters for removal of plant. — Chick Bros. reduced force. — Following firms reduced wages: Gale Shoe Manufacturing Co., J. H. Winchell & Co., Russ Bros., W. W. Spaulding, and J. C. Ivory & Co. — Plant formerly occupied by Haverhill Paper Co., started up; in December added new paper machine.

September. Patent granted to James N. Moulton on skiving machine and to Harold A. Webster on buffing or polishing machine. — Chandler & Burnham, counters, succeeded by C. W. Chandler & Co. — George A. Burnham established manufacture of innersoles and taps. — H. C. Rowe and W. P. Webster established manufacture of shoes, respectively. — New addition to factory of Gale Shoe Manufacturing Co. completed. — N. F. Gorman, shoes, resumed after temporary suspension. — Stevens & Co., woollens, made plans for enlargement of plant. — J. H. Winchell & Co. ran overtime. — J. H. Murray & Co. and H. E. Guptil, shoes, removed to new quarters. — Thos. S. Ruddock & Son reduced wages. — Cutters employed at Chick Bros. struck because of reduction in wages.

October. Patent granted to George W. Carter on notching machine for shoe manufacture. — Thayer & Maguire dissolved; succeeded by Thayer, Maguire, & Field. — Joseph H. Devlin established manufacture of shoes. — W. W. Spaulding and Hussey & Hodgdon increased force. — Removals to new quarters: Thomas Doherty, T. S. Ruddock & Son, Webster & Tabor, J. H. Murray & Co., and Perley Weeks. — Chick Bros. increased wages of McKay lasters. — Improvements made at factory of Fred. M. Hodgdon.

November. A. Roberts & Co., woollens, ran overtime. — Charles and Henry Evans entered into partnership with T. F. Evans in shoe manufacture under name of Evans Bros. Shoe Co. — E. C. Miller removed to new quarters. — Chesley & Rugg enlarged quarters. — Chas. K. Fox made improvements in plant. — J. H. Winchell & Co. and W. W. Spaulding reduced wages. — T. E. Burnham of firm of Bennett & Co., died, aged 47 years. — Factories of Dow & Tilton and W. F. Evans & Co., damaged by fire. — Lasters in employ of Noyes, Reed, & Co. struck because of dissatisfaction with price list.

December. Greeley & Bartlett established manufacture of shoes. — Hussey & Hodgdon removed to new quarters. — T. M. Arnold & Co. dissolved; business continued by Thomas M. Arnold. — John W. Russ Co. shut down for stock taking. — W. R. Whittier, retired shoe manufacturer, died, aged 87 years. Mr. Whittier was first mayor of Haverhill. — Strike against reduction in wages occurred at factory of Thayer, Maguire, & Field; settled by compromise.

The number of cases of shoes shipped during 1897, as compiled by the *Haverhill Gazette*, given in the following table in comparison with the shipments of three preceding years:

MONTHS.	1894	1895	1896	1897
January, ...	26,295	29,857	38,709	41,190
February, ...	27,667	29,519	34,411	43,176
March, ...	41,090	47,275	36,668	44,365
April, ...	31,946	42,056	47,572	51,358
May, ...	31,514	51,276	33,361	34,939
June, ...	35,293	31,599	30,706	28,679
July, ...	20,993	20,704	29,694	29,923
August, ...	27,939	23,500	22,688	22,621
September, ...	22,906	20,356	21,617	32,638
October, ...	23,937	20,847	26,327	25,156
November, ...	27,863	25,546	21,227	25,083
December, ...	30,160	23,875	43,143	42,734
TOTALS, ...	347,803	366,910	386,123	421,862

Increase in 1897 over 1896, 35,739 cases; or 9.26 per cent. Reckoning 40 pairs to a case, there were shipped in 1896, 15,444,920 pairs, and in 1897, 16,874,480 pairs.

Hingham. In June, patent granted William B. Luce on equalizing spring connection. *October.* George A. Wolf, retired shoe manufacturer, died, aged 68 years.

Hinsdale. In January, Hinsdale Bros., woollens, started up after a suspension of several months; in July, ordered new machinery; in October, leased plant of Plunkett Woollen Co.

Holbrook. In January, Goers Bros., shoes, sold out. *May.* Money subscribed for establishment of plant by Holbrook Shoe Manufacturing Co. *June.* Alden & Belcher, shoes, succeeded by Belcher & Reed. *July.* Whitcomb & Paine Co., shoes, resumed operations after temporary suspension. — Paine Shoe Co. shut down indefinitely. *August.* Dexter E. Wilbur & Son removed from Brockton to this place; White-Wilbur Co. formed to manufacture shoes; operations begun in Edmund White factory. — Paine Shoe Co. succeeded by Howard Platts & Paine Co. and operations begun. *September.* White-Wilbur Co. incorporated; capital stock, \$50,000.

Holden. In March, woollen mill owned by West Boylston Manufacturing Co. and operated by William H. Coe, destroyed by fire. — East Lake Woollen Co. ran overtime. *November.* Jefferson Manufacturing Co., woollens, erected new mill office.

Holliston. In February, C. F. Driscoll, shoes, started up after shutdown of several months. — Holliston Equity Co-operative Boot & Shoe Manufacturing Co. incorporated; capital stock, \$1,600; factory leased and manufacture of shoes begun; the formation of this company was the result of a strike. *April.* Holliston Woollen Mills leased by E. M. Rockwell of Leominster; repairs made preparatory to starting up. *August.* Strike occurred at factory of C. F. Driscoll and plant shut down; settled and operations resumed. *September.* Z. Talbot, nails and tacks, decided to build new flume.

HOLYOKE. In January, patent granted to Hulda L. Kress on combination rack and support attachment for stoves. — Germania Mills, woollens, resumed on short time after several weeks' shutdown. — Spinners at Lyman Mills, cottons, resumed work.

February. Buchanan & Bolt Wire Co. succeeded Buchanan, Bolt, & Co.; incorporated; capital stock, \$50,000. — Kastner & Williams Paper Co. reorganized and admitted Henry H. Merriam of Cambridge as partner. — Merrick Thread Co. increased running time. — Strike occurred among weavers at shoddy mill of Connor Bros.

March. Patent granted to Herman I. Koegel on winding and slitting and on paper cutting machine, and to John Vines on envelope making and printing machine. — Nonotuck Paper Co. started up two new machines. — Linden Paper Co. ran nights. — Connor Bros. made changes in looms in mills No. 2 and No. 3. — National Blank

Book Co., Hadley Co., and Lyman Mills resumed full time. — Farr Alpaca Co. started up No. 1 mill on full time.

April. Nonotuck Paper Co. increased wages. — Patent granted to Michael J. Sullivan on exercising device and to James A. Murphy on pneumatic tire.

May. Patent granted to Charles L. Newcomb on air pump and to Samuel M. Green on machine for winding bobbins. — The Beebe & Holbrook Co., paper, reduced to half time. — Massasoit Paper Manufacturing Co. shut down temporarily. — Lyman Mills shut down portion of plant on account of dull trade. — William H. Pryor, paper manufacturer, died, aged 52 years.

June. Massasoit Paper Manufacturing Co. and Merrick Thread Co. resumed operations. — Beebe & Holbrook Co. resumed full time. — Portion of government contract awarded to Holyoke Envelope Co. — Edward C. Taft, paper manufacturer and organizer of Albion Paper Co., died, aged 51 years.

July. Patent granted to Eusabe Picard on sanding apparatus. — William Skinner Manufacturing Co., silks, added new machinery. — Parsons Paper Co. made improvements in No. 1 mill. — Beebe & Holbrook Paper Co. shut down; repairs and improvements made. — Jenkins Rubber Co. changed style to Davis Rubber Co. and decided to remove to New Jersey. — Riverside Paper Co. shut down temporarily on account of high water; resumed. — Lyman Mills shut down on account of dull trade.

August. Patent granted to Richard Griffin on carding engine. — Farr Alpaca Co. completed addition to No. 2 mill; added new machinery and ran nights. — Crocker Paper Co. shut down for one week. — Massasoit Paper Manufacturing Co. ran on half time. — Keating Wheel Co. decided to remove plant to Connecticut.

September. Lyman Mills started up mills Nos. 2, 3, and 4 on full time. — Nonotuck Paper Co. started up two new 120 inch Fourdrinier machines. — Powers Paper Co. completed new mill for manufacture of pads and tablets. — Wauregan Paper Co. made improvements in plant.

October. Patent granted Nathan D. Ingraham on self-attaching button. *November.* William Skinner Manufacturing Co. added new engine of 200 horse power. — Riverside Paper Co. purchased additional land. — Patent granted to Amos D. Rowe on paper-feeding machine; to James C. Keough on quilting machine; and to Charles L. Newcomb on pump cylinder packing. — Roswell M. Fairfield, formerly president of Fairfield Paper Co., died, aged 50 years. *December.* Patent granted to Stephen J. Brennan on store service track; and to Lemuel Coburn on metallic bed and pneumatic mattress. This mattress consists of number of rubber tubes inflated by means of air pump. Steps taken towards formation of company to manufacture bed and mattress.

Hopedale. In January, machine manufacturing firms of George Draper & Sons, Hopedale Machine Co., Dutcher Temple Co., and Hopedale Machine Screw Co. dissolved and consolidated as Draper Manufacturing Co. — Following patents granted: To Edward W. Davenport, take-up mechanism for looms; George O. Draper, transverse seat for foot-power vehicle; William F. Draper, loom shuttle; and James H. Northrop, wheel tire and on stop-motion and shuttle check for looms.

February. Patent granted to Charles F. Roper on stop-motion for looms. *March.* Patent granted to William F. Draper on spooling machine; in May, on stop-motion for looms. *June.* Patent granted to William F. and E. S. Draper on thread cutter temple for looms; in August, to William F. Draper on loom and to George O. Draper on stop-motion for looms.

September. Draper Manufacturing Co. made improvements in fire protection system; started up screw shop on 50-hour time. *October.* Patent granted John L. Burton on filling-changing mechanism for looms. *November.* Draper Manufacturing Co. erected new hose house, 25 x 25 feet, with tower 50 feet high. — Patent granted to Myron J. Bigelow on stop-motion for looms; in December, to James H. Northrop on shuttle box for looms and to James H. Northrop and Myron J. Bigelow on loom.

Hopkinton. In February, Woodville Shoe Co. shut down for two weeks. *June.* Coburn Boot & Shoe Manufacturing Co. incorporated; capital stock, \$500,000. *July.* Crooks, Root, & Co., shoes, reduced wages. *December.* Cloutman, Dunham, & Co., shoes, secured the Alonzo Coburn factory for establishment of that portion of business formerly conducted in Concord Reformatory.

Hubbardston. In May, patent granted to James E. McWilliam on innersole.

Hudson. In January, Dunn, Green, & Co., tanners, resumed full time. — Hudson Rubber Co. incorporated; capital stock, \$25,000. *February.* Stowe, Bills, & Hawley removed portion of plant from Boston to this place. — Millay Last Co. made arrange-

ments for opening additional factory in Haverhill. *March.* Shoe factory of Bradley & Sayward destroyed by fire; work of rebuilding begun. *May.* H. H. Mawhinney & Co., shoes, incorporated as H. H. Mawhinney Co.—Hudson Worsted Co. ran nights, and added new machinery in order to double capacity.—Apsley Rubber Co. readjusted prices in stitching department; in June, employes refused to work at reduced prices and factory shut down; later, opened as a "free shop" and work was resumed with reduced price list. *November.* Bradley & Sayward, shoes, incorporated as Bradley & Sayward Shoe Co.; capital stock, \$75,000.

Huntington. In February, Highland Mills, woollens, started up after shutdown for one year.

Hyde Park. In February, patent granted to James A. Tilden on malting machine.—Foundry of Brainard Milling Machine Co. damaged by fire. *May.* B. B. & R. Knight, cottons, increased to full time.—Patent granted to John T. Robinson and H. J. Chamberlain on paper scoring apparatus, and to Alden D. Wheeler on electric signaling apparatus. *June.* Patent granted to David Manuel on harrow. *July.* Robert Bleakie & Co., woollens, incorporated as Robert Bleakie Manufacturing Co.; capital stock, \$200,000. *September.* Patents granted to George W. Bent on bed and to John T. Robinson and H. J. Chamberlain on quadruple scorer.—Robert Bleakie Manufacturing Co. built new storehouse, added new machinery, and ran overtime; in October, installed electric lighting plant. *November.* Patent granted to Frederick H. Moon on knitting machine.—Spinning room at plant of B. B. & R. Knight, cottons, damaged by bursting of a driving pulley. *December.* Patent granted to Charles H. Fogg on starting and stopping mechanism.—Boiler room at plant of B. B. & R. Knight damaged by fire.

Ipswich. In January, Farley & Daniels, shoes, dissolved; business continued by L. H. Daniels. *April.* Amos Scotton, knit goods, sold out machinery. *May.* Ipswich Mills, hosiery, shut down lower mill indefinitely. *July.* Millett, Woodbury, & Co., shoes, shut down. *August.* Ipswich Mills suspended one week for vacation. *November.* Patent granted to Frank H. Cogswell on shell fuse. *December.* Ipswich Mills ran overtime to fill orders.—Money pledged toward establishment of a shoe factory.

Lakeville. In February, patent granted to John F. Bowman on window clasp. *July.* Land purchased for the erection of bleachery.

Lancaster. In July, Lancaster Manufacturing Co., cottons, shut down for one week; repairs and improvements made and new machinery added; in August, resumed operations; in October, decided to enlarge plant; in November, ran nights. *December.* Patent granted Benjamin F. Wyman on coin box.

Lanesborough. In November, Berkshire Glass Co. resumed operations after protracted shutdown.

LAWRENCE. In January, Everett Mills, cottons, ran on short time.—Pemberton Co., cottons, reduced running time to five days per week.—Emmons Loom Harness Co. reduced running time to eight hours per day.—Joseph Sladdin, inventor and formerly manufacturer of loom harness, died, aged 63 years.

February. Patent granted to Everett P. Richardson on shoe sewing machine.—Washington Mills Co., woollens, ordered new machinery.—Pacific Mills, cottons and woollens, began curtailment of production.—Robert Carruthers, reed manufacturer, decided to remove business to North Carolina.—Briggs & Allyn Manufacturing Co., sashes, doors, and blinds, reduced running time.

March. Brown & Ackroyd, woollens, ran nights, and made improvements in spinning plant.—Pemberton Co. ordered new machinery.—Pacific Mills set up new looms.—L. Sprague Co., bobbins, set up new engine and made other improvements.—Washington Mills Co. added new engine of 1000 horse power.—Atlantic Cotton Mills made repairs on machinery.

April. Patent granted to Martin W. Lydon on automatic fire lighter and to Melvin A. Mills on pump valve and Jordan engine.—Washington Mills Co. and Crescent Worsted Co. ran nights.—Arlington Mills, Pemberton Co., and Everett Mills added new machinery.—F. Ertingshausen, woollens, sold out.—Strike occurred at broom factory of Collins Bros.

May. Work begun on new chimney at Arlington Mills.—Everett Mills increased running time.—Patent granted Joseph A. Little on handle bar adjusting mechanism

for bicycles.—Strike occurred among plumbers and among spinners employed at Washington Mills.

June. Pacific Mills increased to full time in designing department and shut down few days for repairs.—Washington Mills Co. shut down for improvements.—Pemberton Co. reduced running time.—Atlantic Cotton Mills and Everett Mills posted notices of suspensions.—Kimball Bros., shoes, reduced wages and shut down.

July. Patent granted to Leonard L. Doble on shoe box or carton.—Company formed and plans made for erection of new wool-scouring plant.—J. J. Breach, inventor of rounding machine, completed arrangements for its manufacture.—Beach Soap Co. incorporated; capital stock, \$75,000.—Arlington Mills received machinery for new extension to plant.—Pemberton Co., Everett Mill, and Atlantic Cotton Mill shut down in order to curtail production.

August. New boilers set up at Everett Mills and repairs and improvements made.—Atlantic Mills resumed operations after four weeks shutdown.

September. Everett Mills started up in full after shutdown of five weeks.—Washington Mills Co. ran nights.—George E. Kunhardt, woollens, added machinery and ran overtime.

October. Patent granted to Louis B. Coash on oil stove burner.—Washington Mills Co. ordered new wool combers.

November. Crescent Worsted Co. began erection of addition to plant, 16 x 76 feet.—Work begun on Butler's new worsted mill.—George E. Kunhardt, woollens, added new cards.—Caleb T. Briggs, founder of Briggs & Allyn Manufacturing Co., died in Andover, aged 85 years.

December. Patent granted to John Ewart on door check, and to Charles E. Barrett on shake rail for Fourdrinier machines.—Crescent Worsted Co. began erection of addition, to double capacity of plant.—Kimball Bros. resumed operations after two weeks shutdown for stock taking.

Lee. In February, Smith Paper Co. ran on half time. *March.* Eaton, Dikeman, & Co., paper, decided to double capacity of plant by erection of new mill.—Valley and Columbia Mills of Smith Paper Co. ran on half time on account of dull trade. *May.* George T. Bostwick, shoddy manufacturer, died, aged 44 years. *June.* Smith Paper Co. changed name to Smith Tablet Co.—Hurlburt Paper Manufacturing Co. made five-year contract for electric lighting of plant. *July.* Quarry and marble works of William H. Gross ran nights; erection of new shop begun, 75 x 125 feet, with boiler house and engine room.—Hurlburt Paper Manufacturing Co. shut down two weeks for repairs. *August.* Eaton, Dikeman, & Co. awarded contract for addition to Housatonic mill. *October.* Hurlburt Paper Manufacturing Co. made alterations in plant.—Mills of Smith Tablet Co. started on full time.—Eaton, May, & Robbins Paper Co. made plans for alterations and improvements in plant. *November.* J. H. Morley made arrangements for starting up Morley Paper Mill to demonstrate value of new process of bleaching paper stock of which he was inventor.—Smith Tablet Co. made repairs. *December.* William J. Bartlett, paper manufacturer, died, aged 72 years.

Leicester. In January, J. J. Murdock, card clothing, added new card machine.—George W. Olney (Estate of), woollens, added new cloth dryer.—Mill of George Mann & Bro., woollens, rendered useless by taking of water power by city of Worcester; business removed to Brookfield and conducted by Mann-Stevens Woollen Co.—Woollen mills of Newton Darling and Darling, Thayer, & Co. shut down indefinitely. *February.* Bleach house at George W. Olney's mill damaged by fire. *March.* Woollen mill of Newton Darling resumed operations with small force at reduced wages; remaining portion of operatives struck against reduction; in April, part of plant remained idle. *July.* Chapel Mills, woollens, owned by Newton Darling, purchased by Channing Smith and started up.—Factory of H. A. White Co., card clothing, damaged by fire. *August.* Chapel Mills Manufacturing Co. organized to operate Chapel Mills; capital stock, \$23,000. J. D. Clark & Co., woollens, made repairs; shut down for two weeks. *September.* Plant of Perry Cycle Seat Co. purchased by American Watch Tool Co. of Waltham. *October.* J. J. Murdock, card clothing, resumed full time. *December.* Chapel Mills Manufacturing Co. and Valley Woollen Co. announced an increase in wages.

Lenox. In May, James Clifford made addition to planing mill. *July.* Patent granted to James A. Campbell on extension car step.

Leominster. In January, new firm composed of Burton Taylor, Charles W. Conant, and Arthur A. Richardson formed to manufacture combs. *February.* Leominster

Worsted Co. reduced force. *March.* Patent granted to Andrew H. Danforth on insecticide. *April.* New firm, Leominster Toy Co., leased factory and began manufacture of toys. — Charles H. Porter of Tenney & Porter, horn goods, died, aged 50 years. *May.* Leominster Worsted Co. ran overtime. *June.* Patent granted to Frederic Upham on folding stool for use behind counters. — George A. Gane, shirts, resumed operations after temporary suspension. — Factory of Union Desk Co. damaged by fire.

Lexington. In May, patent granted to Elijah A. Shaw on sifter; in September, to Charles A. Wellington on window and casing for cars; in October, to Albert B. Black on snow plow; in November, to Frederic Emery on means for regulating operation of elevators.

Longmeadow. In April, patent granted to John M. Hitchcock on paper box machine.

LOWELL. In January, Lowell Manufacturing Co., carpets, resumed operations after shutdown of two weeks. — Former worsted mill leased by Otis Allen & Son for purpose of manufacturing boxes. — Kitson Machine Co. increased running time. — Tremont & Suffolk Mills Co., cottons, increased running time. — New textile school formally opened. — Patents granted as follows: John Ekengren, safety holders for pocket-books; James T. Cowley, conveying apparatus for store service; Henri N. F. Schaeffer, cloth-washing machine; Charles H. Richardson, doubling and twisting frame.

February. Faulkner Mills, woollens, incorporated; capital stock, \$200,000. — Zephyrin, Arpin, & D'Alford, shoe dealers, purchased material and machinery for purpose of manufacturing. — Merrimack Manufacturing Co., cottons, built addition to finishing room and ran overtime. — Patents granted to Albert H. Morton on feed-stopping mechanism for drilling machines and to Francis J. Freeze on sole-trimming machine. — Tremont & Suffolk Mills Co. ordered revolving flat cards. — Several cotton manufacturing corporations reduced hours according to agreement for curtailment of production. — J. M. Stover, shoes, reduced wages. — Lowell Manufacturing Co., carpets, reduced running time to 40 hours per week.

March. Patent granted to Arthur W. S. Davis on microphone. — Lowell Hosiery Co. increased capacity by adding 400 new machines. — Myron & Mongeau Shoe Manufacturing Co. incorporated. — Lowell Manufacturing Co. shut down for one week in order to curtail production.

April. Haworth & Watson, cop tubes, completed new mill, 60 x 150 feet, three stories, with storehouse, 25 x 150 feet. — Consumers Brewing Co. made plans for ale plant in connection with brewery. — Harriman Suspender Co. received order for one million yards of elastic webbing from England. — Patent granted to George B. Damon and G. W. Pearson on car brake. — Lowell Manufacturing Co. shut down for one week and resumed on 40-hour time.

May. Patents granted James T. Cowley on conveying apparatus; Alfred D. Chandler on ring-spinning frame; and Joseph A. Clauss on shuttle box. — Merrimack Manufacturing Co., cottons, shut down for stock taking.

June. Lowell Manufacturing Co. began erection of addition to plant; 50 x 60 feet, four stories. — Foundation completed for new addition to plant of Consumers Brewing Co. — Boott Cotton Mills added new machinery. — Myron & Mongeau Shoe Manufacturing Co. increased force and started up additional machinery. — Massachusetts and Boott Cotton Mills shut down on account of dull market. — No. 1 mill of Belvidere Woollen Manufacturing Co. damaged by fire.

July. Patents granted to Thomas P. Boulger on heel protector and to Manlius Knowles on liquid holder and wringer. — Merrimack Manufacturing Co. decided to reorganize steam plant. — Stirling Mills, cottons, began erection of new storehouse. — Shaw Stocking Co. readjusted wages in heelng department. — Lowell Machine Shop shut down for one week and resumed on short time. — Massachusetts Cotton Mills shut down for two weeks on account of dull trade and resumed on short time. — Boott Cotton Mills suspended a few days on account of high water. — Lowell Manufacturing Co. ran on short time. — Middlesex Co., woollens, and Lawrence Manufacturing Co., knit goods, announced shutdown.

August. H. D. Foss & Co. established manufacture of candy. — Myron & Mongeau Shoe Manufacturing Co. decided to increase capital stock from \$5,000 to \$10,000 in order to enlarge business. — Plant of Hamilton Manufacturing Co. damaged by bursting of fly wheel; mill shut down for repairs. — Pickering Knitting Co. and Belvidere Woollen

Manufacturing Co. shut down two weeks. — **Middlesex Co.**, woollens, shut down three weeks. — **Lawrence Manufacturing Co.** shut down four weeks. — **Massachusetts Cotton Mills** shut down; resumed operations at Prescott Mill. — **John Pilling Shoe Co.** reduced wages of button-hole workers.

September. **Hamilton Manufacturing Co.** resumed operations. — **Merrimack Manufacturing Co.** added new looms. — Picker room at plant of Tremont & Suffolk Mills damaged by fire. — Strike against reduction in pay occurred at Novelty Suspender Works.

October. Patent granted to Hiram A. Green on doctor for fabric-printing machines. — **Lowell Manufacturing Co.** began erection of new addition to plant. — **American Card Clothing Co.** moved business into new factory. — **Lowell Machine Shop** and Ingrain department of **Lowell Manufacturing Co.** resumed full time. — Wages increased at Novelty Suspender Works.

November. Patents granted to William Sanders on apparatus for making ammonium carbonate, Arthur W. Whitney on game apparatus, and James T. Cowley on seat or cushion. — **Massachusetts Mohair Plush Co.** decided to erect new mill. — **Middlesex Co.**, woollens, shut down for repairs and resumed. — Plant of **Horace R. Barker Manufacturing Co.** damaged by fire.

December. **Massachusetts Mohair Plush Co.** began erection of new mill, 42 x 98 feet, three stories; new dyehouse added and force increased. — **Stirling Mills** completed new storehouse. — **American Bolt Co.** added new machinery. — **George L. Cady**, lathes and mill supplies, ordered new engine. — **Cotton manufacturers** decided to reduce wages of employes about 10 per cent. — **John L. Cheney**, retired bobbin manufacturer, died, aged 81 years. — Hat and bonnet bleachery of **B. H. Fletcher** damaged by explosion and fire.

Ludlow. In January, **Ludlow Manufacturing Co.** made improvements in plant.

LYNN. In January, **Mack Injector Co.** of Boston secured plant of **General Electric Co.** for removal of business to this place. — **Blanchard-Jacques Shoe Co.** succeeded by **F. M. Blanchard Shoe Co.**; incorporated; capital stock, \$12,000. — Patent granted to **Eugene H. Taylor** on heel-making machine. — **W. J. Young**, shoe machinery, added to line of goods. — **C. L. Kirke** established to manufacture sporting shoes and **Chase & Lister** established manufacture of soles, heels, etc. — Removals to new quarters: **Cobb & Putnam**, **John F. Flynn**, and **T. Kieley & Sons**, shoes. — **Harnden & Blanchard**, shoes, succeeded by **George H. Harnden & Co.** — **Long & Gloyd**, shoes, succeeded by **Arthur W. Gloyd**. — **L. J. Richard & Co.**, shoes, succeeded by **Richard & Bray**. — **Amos T. Stocker**, shoes, removed to **St. Johnsbury, Vt.** — **Orrin Brown Mudge**, retired shoe manufacturer, died, aged 72 years. — **John R. McManus** of **Gardiner & McManus**, counters, died, aged 34 years. — **Charles E. Parsons**, retired shoe manufacturer, died, aged 64 years. — Factory of **V. K. and A. H. Jones**, shoes, damaged by fire. — Shoe factories of **Thomas Collyer, Jr.**, and **C. C. Blaisdell** destroyed by fire. — Strike occurred at morocco factory of **Kelley & Green**. — Edgemakers employed at shoe factory of **Welch & Landregan** struck; settled.

February. **A. E. Little & Co.**, shoes, formerly **Little, Maxwell, & Co.** removed from Boston to this place. — **Lowe & Roney** established manufacture of heels. — **Mrs. C. H. King** retired from active partnership in **King Shoe Co.** — Removals to new quarters: **George Richardson Co.**, **Fuller & Besse**, **Wm. A. Faulkner & Co.**, **T. C. Johnson & Sons**, and **Thomas Collyer, Jr.** — **James A. Breed**, retired shoe manufacturer, died, aged 86 years. — **Wilkes Martin**, shoe manufacturer, died, aged 49 years. — Factory of **V. K. and A. H. Jones**, shoes, damaged by fire. — Strikes on account of dissatisfaction with wage scale occurred at shoe factories of **D. A. Donovan & Co.**, **Harney Bros.**, and **James E. Phelan**; settled.

March. Patent granted to **Francis H. Lindsey** and **C. L. Simonds** on refrigerator. — **Foster & Halliday** established manufacture of shoes. — **Faunce & Spinney** added new lasting machines. — **Downs & Watson Co.**, shoes, increased capacity. — **Atkins, Hoyt, & Co.**, cut soles, dissolved; business continued by **Joseph F. Hoyt**. — Strike occurred at shoe factory of **Williams, Clark, & Co.**; business continued as a "free shop." — Good-year turned workmen employed by **F. B. Abbott & Co.** struck for increase in wages.

April. Following patents granted: To **Elihu Thomson**, electric-riveting apparatus; **Eraetus Winkley**, jack-leveling machine; **James H. Reed**, machine for turning lasts; and **George W. Young**, innersole. — **Nichols Bros.**, shoes, dissolved; succeeded by **Nichols & Eaton**. — **Hilliard & Merrill**, cut soles, enlarged quarters. — **James Phelan & Sons**, shoes, ran overtime. — Removals to new quarters: **F. B. Abbott & Co.**, **F. L. Bubler**,

and Lynn Top Lift Supply Co. — It was decided that the State Board of Arbitration should settle dispute in regard to wages between F. B. Abbott & Co. and employés. — Warren H. Usher of Blanchard-Jacques Shoe Co. and J. Otis Collins, inventor of shoe machinery, aged 35 years, died. — Factory of John Lane, shoes, destroyed by fire. — Chippers employed in steel foundry of General Electric Co. struck because of dissatisfaction with pay.

May. Following patents granted: Henry M. Luchia, coupling for cars; Thomas F. MacDonald, sewer trap; John J. Heya, sole-levelling and beating-out machine; and Elihu Thomson, electric transformer. — John Callahan established manufacture of cut soles. — Lovewell Shoe Co. established to manufacture shoes; capital stock, \$23,000. — Gardiner, Beardsell, & Co., counters, moved into new factory. — State Board of Arbitration rendered decision in regard to prices in dispute between F. B. Abbott & Co. and employés. — M. V. Bresnahan produced new levelling machine for bicycle boots. — Murphy Bros., shoes, removed to Danvers. — Faunce & Spinney secured larger quarters. — Everett E. Libbey, cut soles, and W. H. Holt, Jr., slippers, removed to new quarters. — John Donallan & Son, morocco, shut down. — George D. Larkin, retired heel manufacturer, died, aged 75 years. — Strike occurred at morocco factories of Pevear & Co. and Nicholas Weber & Son.

June. Patents granted as follows: Charles F. Stackpole, edge-burnishing machine; Frederick L. Alley, thread-waxing device for sewing machines; Charles P. Holmes, sole sewing machine; Jesse Harris, electric meter; George W. Dearborn, window chair; and Henry A. Henderson, machine for turning or cutting heels. — J. B. Renton, heels, changed style to J. B. Renton Co.; incorporated in July with capital stock, \$125,000. — Novelty Shoe Co. established manufacture of shoes. — Libby & Estes, stains, made improvements in factory. — Hurley & Cashman, Cross & Tucker, and Downs & Watson Co., shoes, increased capacity. — Removals to new quarters: Shillaber & Co., Faunce & Spinney, and Strout, Sager, & Co., shoes; Chase & Lister, counters, and Farrell & Hurley, cut soles. — Richard Bray & Co., shoes, dissolved. — Charles M. Batcheller & Co., cut soles, dissolved; business continued by Batcheller & Hoyt. — Lynn Board of Trade and organized shoe workers requested shoe manufacturers to sign agreement by which all labor difficulties should be settled by State Board of Arbitration. — J. Harvey Young of Young & Sampson, counters, died aged 37 years; business continued by remaining partner and brother of deceased under same name. — Edgar A. Bradley, retired shoe manufacturer, formerly of Bradley & Harrington, died, aged 64 years. — Cutters employed by Harney Bros. struck because of reduction in wages. — Strike of moulders at plant of General Electric Co., in progress since October, 1895, declared off.

July. J. C. Pool & Co. established manufacture of lasts and forms. — F. B. Abbott & Co. discontinued manufacture of slippers; to manufacture women's boots exclusively. — Chauncey A. Sutherland admitted to firm of J. T. Sutherland & Co. — Nichols & Eaton, shoes, enlarged quarters. — J. F. Swain & Co., shoes, of Winsted, Conn., formerly of Lynn, made arrangements to return to this city. — Removals to new quarters: Kellam, Tilton, & Co., J. A. Cook, H. F. McCarthy & Co., and Copeland & Co. — Augustus B. Martin retired from firm of A. B. Martin & Co., morocco. — Shillaber & Co. dissolved; business continued by Charles P. Shillaber. — Harney Bros. and Hurley & Cashman made reductions in wages. — E. F. Estes of W. A. Estes & Co., shoes, died. — Factory of Charles E. Harwood Co., moulded counters, damaged by fire. — Cutters employed by Harney Bros. struck on account of reduction in wages; settled in August.

August. Patent granted to Lebbeus Hill on boot or shoe and to Seth D. Tripp on edge-finishing machine. — T. M. Sylvester established manufacture of shoes. — John F. Flynn sold out to W. D. Sprague. — Removals to new quarters: Lynn Slipper Co., S. I. Lovell & Co., C. H. Henderson & Co., and Carr Bros.

September. Patent granted to William H. Pratt on recording water meter. — J. E. Brown Shoe Co. and T. L. Spencer & Co. established manufacture of shoes. — A. B. Hoffman, leather, moved into new quarters. — J. M. Noyes began erection of popcorn factory; of wood, 26 x 52 feet, two and one-half stories. — John Lane, shoes, succeeded by John Lane & Son. — Williams, Clark, & Co. produced new style flexible boot. — Timothy Kiely, of T. Kiely & Sons, shoes, died, aged 65 years.

October. Patent granted to Harry I. Illingworth on sole sewing machine. — Lynn Cork Co. established manufacture of cork soles. — Slason & Berry established manufacture of shoes. — J. E. Brown Shoe Co. began manufacture. — Pevear & Co., leather, made plans for erection of new factory, 55 x 144 feet, one story. — Lowe & Roney, heels, succeeded by Byron A. Roney & Co. — Richard Conner, retired shoe manufacturer, died, aged 79 years.

November. Patents granted to Elbridge S. Mansell on machine for making spring heels and to Clayton M. Dearborn on folding bracket for builders use. — Durland Counter Co.

succeeded Durland & Co.; incorporated; capital stock, \$5,000. — Bailey Shoe Manufacturing Co. and George L. Preble established manufacture of shoes. — Murray Shoe Co. increased floor space. — Morton & Lyons, counters, and Morning Star Shoe Co. removed to new quarters. — Lummus & Cutler, stains and blacking, dissolved; business continued by Nathan P. Cutler, Jr. — G. Willis Hanson, cut soles, and King Shoe Co. went out of business. — Armenian lasters employed by Charles W. Varney & Co. struck because of reduction in wages.

December. Patent granted to Seth D. Tripp on wrapping machine. — D. H. Shillaber and Lyman O. Berry established manufacture of shoes, respectively. — Osborne & Lee produced a new kind of shoe. — Pevear & Co. began erection of addition to plant. — C. L. Hawthaway & Sons, cement, began erection of new building, 30 x 40 feet, one story. — Cross & Tucker increased capacity of stitching plant. — Maurice Flynn added line of machines for manufacturing finer grade of goods. — Weber Leather Co. added glazing machines. — Ellaworth & Quereau increased space. — Removals to new quarters: F. B. Abbott Co., Thos. Collyer, Jr., W. J. Creighton & Co., D. F. Hooley, James Cogswell, and Benjamin Dore & Co. — Sisson & Berry dissolved. — Hand-turned workmen employed by Faunce & Spinney struck because of reduction; settled.

Lynnfield. In December, shoe factory of Henry Law destroyed by fire.

MALDEN. In February, patents granted as follows: Wm. B. Draper, clasp or fastening device; Alfred G. Moore, bicycle rim; and Henry H. Cummings, printing press. *March.* Patent granted to George N. Gordon on machine for inserting fastenings in boots and shoes. — Last factory of Boston Rubber Shoe Co. destroyed by fire. *April.* Following patents granted: Florentine A. Jones, fountain pen for recording instruments; James F. Atwood, garment supporting clasp; Osborn B. Hall, pipe wrench; John G. Foster, false bow for canal boats; and George E. Tregurtha, device for reversing motion of propeller wheels. — Strike occurred among Italian laborers. *May.* Boston Rubber Shoe Co. resumed after temporary suspension. — Patent granted to Joseph T. Haskins on operating mechanism for car bells. *June.* Darlord Manufacturing Co. began erection of factory, 40 x 80 feet, three stories. — Factory of George P. Cox Last Co. destroyed by fire. *July.* Patent granted to Charles H. Niedner on heddle frame. *August.* Patent granted to George K. Thompson on telephone central station signaling circuit. *September.* Factory of Sutherland Drug Co. destroyed by fire.

Manchester. In June, patent granted to Francis M. Andrews on lubricator.

Mansfield. In January, Mansfield Shoe Co. established to manufacture shoes. *April.* Patent granted Fred S. Bliss on sand box for railway cars. *June.* Shields Foundry Co. incorporated; capital stock, \$5,000. *October.* Mansfield Print Works established to print calicoes and to bleach and dye cotton goods. *November.* Burpee Rumsey, shoes, added new lasting machines; in December, strike of lasters against prices occurred.

Marblehead. In January, Dooling, Martin, & McCoy established manufacture of shoes. — Monroe Shoe Co. removed business from Reading to this place. *May.* A. J. Foster & Co., morocco, made repairs on former glue factory of George W. Brown preparatory to removing business from Milford, N. H., to this place; in June, machinery arrived. *July.* Brown & Denning established manufacture of infants shoes. *August.* Humphrey & Paine established manufacture of shoes. — Bird & Stevens removed from Boston and began manufacture of shoes. — Arrangements made for the manufacture of paper boxes and palls. — Cole & Wiggin, shoes, enlarged plant. *September.* Clish & Hawes established manufacture of shoes and George F. Summers & Co. established manufacture of counters. — T. P. V. Chadwick increased space. *October.* Sweet & Savoy established manufacture of shoes. *November.* Erection of building begun, 38 x 50 feet; to be used as carriage manufactory by Clarence H. Tuxbury. *December.* W. H. Boynton & Son succeeded by Boynton Shoe Co. — L. E. Cruft, shoe manufacturer, died.

MARLBOROUGH. In April, E. Loring set up machinery and began manufacture of shoes. — Boyd & Corey Boot & Shoe Manufacturing Co. reduced wages of employés; in May, proposed profit sharing system to employés. *May.* S. H. Howe Shoe Co. announced 10 per cent reduction; compromise effected and five per cent reduction substituted; later, profit sharing scheme proposed to employés. — John A. Frye, shoes, ran on reduced time. *June.* Employés of S. H. Howe Shoe Co. agreed to accept five per cent

reduction for one year. *July.* Walter F. Jennings and Elmer Loring formed partnership for the manufacture of bicycle shoes. — William B. Rice, president of Rice & Hutchins Co., offered to establish new shoe factory provided it should be exempt from interference by the labor unions for two years. The proposition was considered by the unions and accepted; in August, factory secured and machinery set up. *September.* Boyd & Corey Boot & Shoe Manufacturing Co. removed to Maine. *December.* Business of Wood-Willard Elevator & Machine Co. purchased by locomotive manufacturing firm and arrangements made for removal to Maine.

Marshfield. In April, Clifton Rodgers, formerly of the firm of Rodgers, Richards, & Co., leather, Boston, died, aged 91 years.

MEDFORD. In February, patent granted to John S. Hansen on letter feeding attachment for mail marking machines and to Ernest C. Ropes on telephone signal transmitter; in June, to James F. Ffield on woodworking machinery; in September, to William H. Griffiths on interlocking cone pulley; in November, to A. B. Shaw on pneumatic tire and to George W. Prouty on skate.

Medway. In February, Cole, Senior, & Co., woollens, resumed full time. *May.* Hirsh & Park, straw and felt hats, ran nights. *June.* Patent granted to Joseph W. Thompson on self-adjusting follower for boots or shoes. *July.* Hirsh & Park resumed operations after temporary shutdown. *August.* Cole, Senior, & Co., woollens, shut down for one week for repairs. *December.* Hirsh & Park increased force. — New England Awl & Needle Co. shut down for two weeks.

Melrose. In February, patent granted to John T. Copithorn on life preserver support for vessels; in March, to Charles H. Little on adding and registering mechanism and to Charles W. Warner on planter. *November.* Richard H. Sircom & Co., clothing, added one story to factory. — Patent granted to John E. Leavitt on polishing apparatus.

Mendon. In June, patent granted to Samuel W. Wilcox on plumb bob.

Merrimac. In January, Merrimac Wheel & Gear Co. started up. *April.* J. A. Lancaster & Co., carriages, increased output. *August.* Addition built to plating works of J. H. Murphy. *November.* George Adams & Sons, carriages, decided to remove plant to Reading.

Methuen. In January, Methuen Co., cottons, shut down for a few days; later, storehouse damaged by fire. *March.* Tremont Worsted Co. and Lawrence Knitting Co. made additional provision against fire. *May.* J. M. Tenney, hats, shut down for repairs and resumed. *June.* Employés of Methuen Co. given choice of accepting reduction in wages or having mill suspend operations; it was decided to accept 10 per cent reduction; mule room suspended operations for few days. *July.* Patent granted to Frank A. Wardwell on picker for looms. — Knitted Fabrics Co. resumed operations. — Tremont Worsted Co. ran overtime and began erection of new addition to be used as dyeing plant. — New wage schedule went into effect at plant of Methuen Co. — Machinery of Wendell Bros., yarns, damaged by leaking of automatic sprinklers; shut down for repairs. *August.* Knitted Fabrics Co. suspended for a few days. — Wendell Brds. decided to remove plant to Meredith, N. H. — Methuen Co. shut down three weeks for repairs. *September.* Knitted Fabrics Co. increased force. — Methuen Co. added new looms. *November.* Tremont Worsted Co. advanced wages of weavers 10 and 20 per cent. *December.* Methuen Co. made improvements. — J. M. Tenney, hats, shut down one week for repairs. — Knitted Fabrics Co. shut down for stock taking.

Middleborough. In February, Leonard & Barrows, shoes, resumed full time. — Henry Deane admitted as partner in firm of Leonard & Shaw, shoes. — Phinney & Penniman, shoes, succeeded W. O. Penniman. *March.* Edgesetters at factory of Leonard & Barrows struck. *May.* C. H. Alden & Co., shoes, built addition. *September.* Work begun on addition to factory of Leonard & Barrows; 15 x 100 feet, two stories. *December.* Hathaway, Soule, & Harrington, shoes, started up on new run. — W. B. Stetson, shoes, retired from business; to be succeeded by Stetson & Sheppard.

Milford. In January, Ewing & Buckley established manufacture of shoes. *March.* Patent granted to Henry Lawrence on spooler guide. — O'Donnell & Brennan established

manufacture of shoes. *April*. Milford Steam Heat, Power, and Refrigerating Co. incorporated; capital stock, \$100,000. *May*. Milford Pink Granite Co. increased force.—C. J. Driscoll of Natick made arrangements to manufacture shoes in the Newhall & Buckley factory. *July*. D. J. Howard, shoes, sold half interest to D. E. Howard; style changed to Howard Bros.—Plant of B. H. Spaulding, straw goods, advertised for sale.—C. J. Driscoll began manufacture under style of Driscoll Shoe Co.—Trees at shoe factory of Clapp, Huckins, & Temple struck because of reduction; factory shut down; strike settled by compromise and operations resumed. *August*. Women sewers employed by B. H. Spaulding, straw hats, struck because of reduction in wages. *September*. Patent granted to William J. Dix on sewing machine attachment.—Ewing & Howard, shoes, dissolved.—Dispute between B. H. Spaulding and employés concerning wages submitted to State Board of Arbitration; experts appointed to investigate; satisfactory settlement reached and work resumed. *December*. F. W. Mann & Co., machinists, installed electric lights.—Milford Shoe Co. shut down for stock taking and resumed.

Millbury. In January, Edwin Hoyle & Son started up Ramshorn Woollen Mill.—Lapham Woollen Mill property purchased by corporation to be known as Millbury Woollen Mills Co. *February*. Firm of Whitney & Molt, indigo dyes, reorganized; new firm, Molt Bros. succeeded. *March*. Millbury Woollen Mills Co. made improvements in machinery and started up.—Plant of C. D. Morse Manufacturing Co. changed owners.—Molt Bros. started up dye works and decided to enlarge plant. *April*. Millbury Woollen Mills Co. shut down. *May*. B. O. Paine invented machine for punching cold metal with hand power.—John Rhodes Warp Co. increased to full time.—Portsmouth Mills Co., knit goods, reduced running time on account of dull trade. *July*. John Rhodes Warp Co. reduced running time to four days per week.—Millbury Cotton Mills shut down indefinitely. *August*. Lapham Woollen Mill property sold at auction.—Millbury Cotton Mills resumed operations. *September*. Patent granted Rinaldo V. Carey on fire hose cleaning mechanism.—Ice house of William A. Harris destroyed by fire. *October*. Patent granted Hudson W. Hakes on vehicle seat.—Lapham mill property purchased by Mayo Woollen Co. and started up.—Cordis Mill Co. made plans for a new brick storehouse, 50 x 120 feet, two stories. *November*. Mayo Woollen Co. made repairs and improvements.—Cordis Mills Co. awarded contract for new dyehouse, 58 x 75 feet, one story. *December*. Millbury Cotton Mill announced reduction in wages.

Mills. In July, addition built to felt mill of A. M. & P. A. Waite. *December*. J. M. Herman & Co., shoes, resumed full time.

Milton. In January, Tileston & Hollingworth Co., paper, shut down temporarily for repairs. *March*. Patent granted to Christopher A. Shea on train-controlling device. *November*. Everett D. Lee & Co. established manufacture of shoe stains, cement, etc.

Monroe. In July, James Ramage Paper Co. completed new addition to plant containing new offices and storage rooms; 38 x 150 feet, two stories.

Monson. In January, D. W. Ellis & Son, woollens, shut down during two weeks for repairs. *February*. S. F. Cushman & Sons, woollens, resumed operations on full time. *June*. Helmann & Lichten, straw goods, shut down for season.—Silver Street Woollen Mill, not in operation, owned by A. D. Brown, destroyed by fire. *August*. D. W. Ellis & Son resumed full time.—George C. Flint and others purchased woollen mill to establish manufacture of thread. *October*. Woollen manufacturers decided to advance wages $6\frac{1}{4}$ per cent because of improved conditions. *November*. R. M. & Theodore Reynolds, woollens, added new machinery.

Montague. In January, patent granted to William R. Farnsworth and P. Farwell on wood pulp grinding mechanism.—Montague Paper Co. shut down for repairs and new machinery. *March*. Patent granted to Leander Bartlett on planing machine. *April*. Marshall Paper Co. ran overtime. *May*. The John Russell Cutlery Co. shut down for inventory and repairs, resumed in June. *September*. Turner's Falls Paper Co. added new water wheel; resumed operations after shutdown for repairs. *November*. Turner's Falls Cotton Mills shut down for repairs and resumed.

Nantucket. In March, patent granted to William B. Starbuck on truss.

Natick. In January, George E. Bliss, cigar manufacturer, died, aged 46 years. *April*. John H. Craig established manufacture of shoes.—Natick Shoe Manufacturing

Co. dissolved; succeeded by Cloutman, Dunham, & Co. — Factory of Brennan Boot & Shoe Manufacturing Co. destroyed by fire. *May.* C. J. Driscoll leased factory in Milford for the manufacture of shoes. *June.* Patent granted to Preston C. Morse on cloth cutting machine. *July.* Natick Underwear Co. secured quarters in Springfield for removal of plant to that city. *October.* John Schneider, shoes, succeeded by Schneider Bros. *December.* Patent granted to Frederick W. Lynn on machine for removing gore pieces from linings of shoes.

Needham. In January, knitting mill of William Carter & Co. resumed full time. — Patent granted to Winthrop M. Chapman on repeater. — Alexander Lynes, Sr., retired knit goods manufacturer, died, aged 72 years. *April.* Patent granted to Emery Grover on computing scale. *May.* Patent granted to Charles W. Hedenburg and C. S. Reamy on braized tube joint. *October.* William Carter & Co. began erection of new addition to plant, 25 x 32 feet, two stories, for storage purposes. *November.* John F. Brooks & Co. purchased land for erection of new knitting mill. *December.* Wye Bros. & Co., knit goods, begun erection of new addition to plant.

NEW BEDFORD. In January, Bennett Manufacturing Co., cottons, resumed full time. — Wamsutta Mills, cottons, started up new machinery.

February. Columbia Spinning Co. resumed full time. — Portion of plant of Acushnet Mills Corporation, cottons, destroyed by explosion.

March. Oneko Mills Corporation, woollens, shut down permanently. — Whitman Mills, cottons, petitioned the Legislature for permission to increase capital stock from \$700,000 to \$2,000,000.

April. New Bedford Manufacturing Co. voted to increase capital stock and add 40,000 spindles. — Patent granted to Horace C. Johnson on automatic bell buoy and to Henry W. Mason on selective signal for telephone circuits.

May. Beacon Manufacturing Co. cotton and woollen yarns, began operations. — Patent granted to John E. Gibbs on holisting bucket. — Taber Art Co. increased running time to full; announced intention of consolidating with Prang Co. and removing to Springfield. — Howland Mills and Rotch Spinning Corporations decided to reduce capital stock; wages readjusted; strike followed; work resumed after temporary suspension. — Frank R. Hadley, president of Bennett Manufacturing Corporation, Columbia Spinning Co., and Lambeth Rope Co., died.

June. Whitman Mills Corporation completed reorganization and increased capital stock from \$700,000 to \$1,000,000. — Lambeth Rope Co. reorganized.

July. Creditors of New Bedford Cotton Manufacturing Co. formed plans to organize new company under name of New Bedford Spinning Corporation. — New Bedford Copper Co. added new engines. — City Manufacturing Corporation ran on reduced time to curtail production. — Wamsutta Mills, cottons, shut down temporarily and resumed. — Hathaway Manufacturing Co., cottons, shut down portion of plant for repairs. — Picker room of No. 1 mill of City Manufacturing Corporation damaged by fire.

August. Howland Mills corporation completed reorganization. — W. S. Hill Electric Co. added brass foundry to plant. — Wamsutta Mills shut down portion of plant. — Hathaway Manufacturing Co. shut down for repairs.

September. Rotch Spinning Corporation reorganized and resumed full time. — Hathaway, Soule, & Harrington, shoes, decided not to remove plant from this place.

October. New Bedford Manufacturing Co. reorganized under name of New Bedford Spinning Co.; capital stock, \$230,000. — Pairpoint Manufacturing Co., silverware, decided to build new shed to be used as packing house, 24 x 34 feet. — Plant of New Bedford Paper Co. destroyed by fire; plans made for rebuilding.

November. Wamsutta Mills ordered new machinery. — Contract awarded for new building, 30 x 160 feet, for New Bedford Paper Co.; to replace one destroyed by fire. — City government appropriated \$25,000 for establishment of textile school. — New Bedford Spinning Co. added new spinning frames.

December. Patent granted to Alfred Isherwood on loom shuttle. — Rebuilding of plant of New Bedford Paper Co. completed. — Plants of Bennett Manufacturing Corporation and Columbia Spinning Co. advertised for sale at auction. — Grinnell Manufacturing Corporation added new looms. — Cotton manufacturers decided to reduce wages, including salaries, about 10 per cent.

Newbury. In April, Byfield Woollen Mills decided to enlarge plant by construction of new storehouse; in May, shut down temporarily on account of breaking of shaft; in June, storehouse completed. *July.* Byfield Woollen Mills incorporated; capital stock,

\$40,000; in August, ran on short time. *September.* J. O. Rogers, shoes, resumed operations.—Pearson Tobacco Co. added two new water wheels.—Byfield Woollen Mills resumed full time. *December.* J. O. Rogers shut down for stock taking.

NEWBURYPORT. In January, Barton & Thurlow, shoes, moved into new factory. *February.* Merrimac Ceramic Co., new firm, established manufacture of tile bricks; capital stock, \$50,000. *March.* Burley, Stevens, & Co., shoes, decided to increase output by employment of 100 additional hands. *April.* Keith Leather Co. established manufacture of leather stains and dressings.—Bridges & Bodine established manufacture of heels.—Burley, Stevens, & Co. leased additional quarters for enlargement of plant.—Patents granted to Alfred D. Ordway on bakers oven and to James W. Hale on refill for cisterns. *May.* Patent granted to Ernest Clarkson on gem plincers. *June.* W. C. Hardy & Co. of Georgetown secured temporary quarters for box factory. *July.* Patent granted to George F. Woodman on adjustable steering-head for bicycles.—Peabody Mills, cottons, shut down for repairs and resumed; in August, indefinite shutdown decided upon. *September.* Kelleher & Patriquin established manufacture of snow plows for electric railroads.—Peabody and Victoria Mills shut down indefinitely. *November.* Shoe factory of Dodge Bros. damaged by leakage of automatic fire protectors. *December.* Barton & Thurlow, shoes, began erection of addition to plant, 26 x 64 feet, one story.

New Salem. In June, patent granted to Clifton R. Bridges on regulator for incubators. *November.* Harry Carlisle & Co. started up new paper mill in the manufacture of coated box stock, lithograph paper, and cardboard; 100 employed.

NEWTON. In January, patent granted to Edward Dummer on winding machine and to Charles J. Balléy on overshoe. *February.* Nonantum Worsted Co. resumed operations.—Patent granted to Chester C. Small on mail selecting and distributing machine and to Edward Dummer on heater and illuminator. *March.* W. S. & F. Cordingly, shoddy, resumed full time and ran nights. *April.* Patent granted Duane H. Church on balance escapement. *May.* Patents granted to Charles Mills on devices for card-clothing machines, to John S. Batchelder on door securer, and to Henry E. Walte on mail-marking machine. *July.* Patents granted to William B. H. Dowse on fastener, to Frank R. Chamberlain on pneumatic tire, to George H. Phelps on garment supporter, and to Freeman W. Hood on water meter; in August, to G. H. Williams on bicycle support and to Freeborn F. Raymond on button-hole sewing machine. *September.* Patent granted to Franklin T. Miller on copying machine.—Paper mills of Robert Bishop damaged by fire. *October.* Patent granted to Wm. L. Harvie on trolley for electric cars. *November.* Pettee Machine Co. of this city and Saco Water Power Machine Shop of Biddeford, Me. consolidated under name of Saco & Pettee Machine Shops; capital stock \$800,000. *December.* Patent granted to Duane H. Church on watch-plate drilling and tapping machine.—Newton Manufacturing Co. incorporated to manufacture textile goods.—Henry A. Pemberton, formerly of Pemberton Bros., leather, died, aged 53 years.

Norfolk. In January, paper mill owned by John F. Wall destroyed by fire.

NORTH ADAMS. In February, J. M. Canedy, shoes, succeeded by Canedy-Clark Shoe Co.—Johnson Manufacturing Co. and Dunbar Mills Co., cottons, started up additional looms.—Blackinton Co., woollens, resumed on full time after shutdown of several months.—Factory of Barber Leather Co., novelties, damaged by fire. *April.* Johnson Manufacturing Co. started up more looms.—Arnold Print Works broke ground for a new storehouse, 75 x 300 feet. *May.* C. T. Sampson Manufacturing Co., shoes, reduced wages; strike of cutters followed; settled. *July.* Barber Leather Co. decided to erect new factory; plans made and contract let; 52 x 100 feet, four stories.—Windsor Co., cottons, ordered new machinery; Eagle, Estey, and Stone Mills shut down; Estey and Stone permanently; business to be concentrated in Eagle Mill. *August.* North Adams Manufacturing Co., woollens, shut down one week for repairs.—Storehouse of Arnold Print Works damaged by fire. *September.* Windsor Co. prepared plans for new finishing room, 60 x 90 feet, and new storehouse, 60 x 200.—W. G. Cady & Co., shoes, made improvements in fire protection system.—Blackinton Co. increased wages.—About 350 weavers, employés of Eclipse and Beaver Mills, struck because of reduction in wages; later, resumed work at reduced scale for one month's trial. *October.* Mill of Blackinton Co. ran overtime.—Building permit issued Frank J. Barber for new factory, 40 x 80 feet, three stories. *November.* Arnold Print Works

added new engraving machines. — F. J. Barber Manufacturing Co. incorporated; capital stock, \$25,000. — H. T. Cady, shoes, decided to go out of business. — Henry A. Cady associated with H. T. Cady in shoe manufacture, died, aged 55 years. *December.* Weber Bros. purchased Holden Street factory of W. G. Cady & Co. — Strike occurred at factory of C. T. Sampson Manufacturing Co. because of reduction in prices.

NORTHAMPTON. In January, patent granted to James W. Cole on shutter worker and sash fastener; in February, to Fortune I. Bailey on cash indicator and register; in March, to Ezra E. Clark on balancing apparatus for pumps. *May.* Mt. Tom Sulphite Pulp Co. built additional boiler house, 22 x 54 feet. — Factory of Northampton Cycle Co. damaged by fire. *June.* Company formed to manufacture ivory buttons; plans made for erection of factory, 25 x 80 feet, three stories. *July.* Northampton Cycle Co. began erection of addition to plant; of brick, 50 x 100 feet, one story. *September.* Patent granted to Alanson C. Estabrook on brush. — Plant of Morley Paper Co. sold at auction. *October.* Patent granted to William W. Lee on oil distributing projectile. *November.* Alexander McCallum purchased interest in hosiery department at silk mill of Belding Bros. & Co. and took steps towards organization of stock company to carry on this department independently. *December.* Lewis E. Warner invented motor carriage built of bicycle tubing, equipped with pneumatic tires, and run by electricity.

North Andover. In January, North Andover Mills, woollens, shut down on account of lack of orders; in February, resumed; in April, increased wages of spinners. *May.* Sutton's Mills, woollens, added new machinery and water wheel; in June, shut down for improvements. *July.* North Andover Mills made improvements in fire protection service. *August.* M. T. Stevens & Sons, woollens, added new machinery. *September.* Plant of Bay State Dye Works changed owners. — Brightwood Manufacturing Co., woollens, made plans for erection of addition to plant, 54 x 80 feet, two stories; in October, awarded contract and ran overtime.

North Attleborough. In January, Shaw Manufacturing Co. moved into new quarters. *March.* L. M. Briggs and H. S. Stevens began manufacturing under name of Merriman Silver Co. *June.* Palmer & Peckham purchased plant of French & Franklin Manufacturing Co.; business consolidated. — Phillip A. Thurber and William H. Franklin formed partnership to carry on business of enameling. *July.* Plant of C. E. W. Sherman & Son, gold refiners, damaged by fire. *September.* Factory of J. F. Sturdy's Sons, jewelry, shut down temporarily because of accident to power plant.

Northborough. In April, Worcester & Marlborough Street Railway Co. erected new power station; engine room 55 x 63 feet and boiler room 40 x 45 feet. *June.* Woodside Mills, woollens, shut down indefinitely. *September.* Company organized to manufacture speed attachment for bicycles, invented by Charles H. Murray; capital stock, \$50,000.

Northbridge. In January, Riverdale Woollen Co. completed new storehouse, 50 x 200 feet, and resumed full time. *February.* Whitin Machine Works reduced force and running time. *March.* Whitinsville Spinning Ring Co. resumed full time. — Whitin Machine Works installed electric system and started up several idle departments. *May.* Patent granted to Henry S. Houghton on cotton opener. — Linwood Mill and Whitinsville Cotton Mills reduced running time to 40 hours per week. *July.* Whitin Machine Works added new machinery and made improvements in plant. *August.* Linwood Mill and Whitinsville Cotton Mills resumed full time. — Whitinsville Spinning Ring Co. shut down one week for vacation. *October.* Riverdale Woollen Co. ran nights. *November.* Whitinsville Cotton Mills made improvements in plant. *December.* Whitinsville Spinning Ring Co. exported certain articles of product to Russia.

Northfield. In October, patent granted to George K. Burleigh on illuminated electric sign.

Norton. In July, patent granted to Frank P. Barney on self-closing gas burner; in September, to Howard A. Tinkham on lock-joint pipe and collar coupling for stoves or furnaces.

Norwood. In May, Norwood Press Co. began erection of new building to be used as bindery; of brick and iron, 85 x 175 feet, three stories; in July, completed and dedicated. *August.* New printing industry, Plympton Press and Bindery, established in new building, 63 x 162 feet, three stories with basement.

Orange. In January, patent granted to Albert F. Robbins on watchmakers' tool. *February.* Mann & Sprague, clothing, built addition; in March, ran overtime. *May.* Jay B. Reynolds Shoe Co. incorporated; capital stock, \$100,000. — New Home Sewing Machine Co. decided to erect new shipping house. — Patent granted to John B. Chace on grooving machine. *June.* New Home Sewing Machine Co. shut down for improvements. *August.* Patent granted to Charles H. Otis on holder for incandescent lamps and to Alvord O. Manning on scaffolding jack. *September.* Lasters employed by Jay B. Reynolds Shoe Co. struck because of reduction in wages. *November.* Orange Furniture Co. made plans for enlargement of plant. — Mann & Sprague, clothing, ran nights. *December.* Orange Furniture Co. began erection of addition to plant.

Orleans. In May, patent granted to Edgar H. Upham on combined screw driver and screw holder.

Otis. In February, wood turning plant of M. A. Harrington destroyed by fire; in October, resumed business in new location.

Oxford. In May, Orrin F. Joslin retired from firm of A. L. Joslin & Co., shoes; in June, factory shut down temporarily for repairs; in December, increased from partial to full time.

Palmer. In January, Holden & Fuller, woollens, shut down temporarily for repairs. *March.* Thorndike Manufacturing Co., cottons, reduced running time to 40 hours. *May.* Plans made for erection of new cotton mill, 50 x 320 feet. — Holden & Fuller resumed operations after short suspension. — Thorndike Manufacturing Co. increased running time; shut down No. 2 mill. *July.* Palmer Wire Manufacturing Co. made repairs and improvements in plant. — Holden & Fuller shut down on account of lack of orders; in August, resumed operations. — Henry E. Bolton, retired paper manufacturer, died, aged 82 years. *August.* Thorndike Manufacturing Co. resumed full time. *September.* Holden & Fuller resumed full time. *October.* Thorndike Manufacturing Co. made improvements in machinery. *November.* Palmer Carpet Manufacturing Co. shut down temporarily on account of illness of superintendent. *December.* Thorndike Manufacturing Co. erected new boiler and engine house. — Weaving room of Palmer Carpet Manufacturing Co. damaged by fire.

Peabody. In January, woollen mill of A. B. Clark completed. *February.* Daniel Woodbury, retired morocco manufacturer, died, aged 76 years. *March.* Peter Slim, tanner, died, aged 65 years. *April.* W. W. McDonald established manufacture of leather. *May.* Factory of A. D. Osgood, innersoles, damaged by fire. *June.* Patent granted to Albertus Travis and Willoughby P. Earley on apparatus for treating and coloring hides or skins. — R. G. Nelson & Son, tanners, built addition, 45 x 90 feet, and added boiler stack and automatic sprinklers. *September.* Patent granted to Charles A. Southwick on machine for glazing and pebbling leather. *October.* Poor & Littlefield, morocco, built addition to factory to accommodate new hydraulic press. — Thomas H. O'Shea, morocco, enlarged capacity. *November.* H. A. Pemberton Leather Co. incorporated; capital stock, \$5,000. *December.* Parmenter & Polsey Fertilizer Co. incorporated; capital stock, \$100,000.

Pepperell. In March, Gregory, Shaw, & Co., shoes, resumed full time.

PITTSFIELD. In January, Stanley Electrical Manufacturing Co. ran nights to fill orders. — Pittsfield Manufacturing Co., yarns, shut down on account of dull trade.

February. Strike occurred among weavers of Peck Manufacturing Co., woollens.

March. L. C. Farnsworth & Co. established manufacture of card clothing. — Pontoosuc Woollen Manufacturing Co. leased Pomeroy mill and started it up after an idleness of two years. — Woollen mills of William E. Tillotson ran nights. — Plans made for new planing mill; of wood, one story. — Russell Manufacturing Co., woollens, resumed full time. — Wilson & Horton discontinued work in Bel Air mill. — O. W. Robbins Shoe Co. reduced wages of lasters.

April. Peck Manufacturing Co., woollens, reduced wages. — Dryhouse of Pontoosuc Woollen Manufacturing Co. damaged by fire.

May. Patent granted to John H. Musgrove on machine for sewing looped fabrics. — D. M. Collins & Co., knit goods, resumed full time. — Pontoosuc Woollen Manufacturing Co. ran nights. — Russell Manufacturing Co. granted employees Saturday half-holiday. — E. D. Jones' Sons & Co., iron foundries, reduced running time.

June. Patent granted to William W. Tracy on bullet lubricating device. — Cheshire Shoe Manufacturing Co. resumed after shutdown for inventory. — Wm. E. Tillotson, woollens, suspended temporarily to set up new machinery. — Wage differences between O. W. Robbins Shoe Co. and employes settled satisfactorily.

July. E. D. Jones' Sons & Co. resumed full time. — Plans made for the erection of factory building, 36 x 100 feet, three stories, for the accommodation of several manufacturing firms. — Pittsfield Electric Co. built addition to plant. — Pontoosuc Woollen Manufacturing Co. shut down Pomeroy mill indefinitely.

August. Stock subscribed for new company to manufacture electric meters and other inventions under name of Stanley Instrument Co. — Cheshire Shoe Manufacturing Co. and William E. Tillotson, woollens, ran nights. — Pontoosuc Woollen Manufacturing Co. started up Pomeroy mill. — Pittsfield Manufacturing Co., woollens, shut down two weeks for repairs. — Weavers employed by Peck Manufacturing Co. struck for increase in pay; resumed work later at former rate.

September. Pontoosuc Woollen Manufacturing Co. awarded contract for new addition to plant; of brick, 50 x 100 feet, two stories. — Hadley-Smith Shirt Co. began operations with about 50 employes. — Russell Manufacturing Co. and spinning and carding departments at Taconic Mills ran overtime. — Patent granted to William Stanley on magnetic brake. — Wilson & Horton leased Bel Air Mill for five years and made repairs and alterations and improvements in fire protection system.

October. Foundation for new addition to plant of Pontoosuc Woollen Manufacturing Co. completed. — A. H. Rice & Co., silk thread, ran nights. — Wm. E. Tillotson, woollens, shut down to allow new engines to be set up. — O. W. Robbins Shoe Co. shut down for inventory and ran overtime. — Cheshire Shoe Manufacturing Co. shut down for inventory.

November. Patent granted to Charles J. Cole on safety plug for steam boiler. — New building and other improvements at plant of Pontoosuc Woollen Manufacturing Co. completed, and new engine of 250 horse power set up. — Stanley Instrument Co. ran nights.

December. Hurlburt Stationery Co. ran nights. — Machinery arrived from England for new addition to plant of Pontoosuc Woollen Manufacturing Co. — Wm. E. Tillotson and D. M. Collins & Co. suspended temporarily because of loss of power through accident.

Plymouth. In January, Russell Mills Co., cotton duck, started up plant after three years idleness. **February.** Factory of Edes Manufacturing Co. destroyed by fire.

March. Patent granted to George D. Bartlett on machine for manufacturing nails and to Charles C. Doten on means for securing partitions of cabinets. **August.** Plymouth Woollen Co. ran nights. **September.** Standish Worsted Co. added new looms and made plans for enlargement of plant. **December.** Plymouth Cordage Co. awarded contract for new storehouse and addition to plant.

QUINCY. In February, G. L. Miller of Miller & Luce, granite, died. **April.** Patents granted to John B. Price on type-writing machine and to Henry C. Weeden on roof flange. **May.** Patents granted to Perley R. Glass on eyeletting machine and to Charles A. Pinkham on rotary printing machine. — H. E. Dawes leased factory and set up looms for the manufacture of carpets. **August.** Patent granted to John Lizotte on reversing mechanism. **October.** Patent granted to Victor J. Emery on pipe hanger. — About 16 stone cutters in employ of Thomas & Miller struck because of grievance. **December.** Patent granted to George L. Badger on machine for working stone. — Quincy Shoe Co. voted to increase capital stock to \$6,000.

Randolph. In January, John Peach & Co., shoes, moved into new quarters. **March.** Richards & Brennan established manufacture of shoes. **June.** Hagerty & Sullivan of Brockton, shoes, leased the John Peach factory. **July.** Work begun on 50-foot addition to Burt factory. — Hagerty & Sullivan removed from Brockton to this place. — William H. Gibbons & Co., shoes, discharged lasters. — Nathaniel Howard, retired shoe manufacturer, died, aged 80 years. **September.** Lasters employed on Chase machines at factory of Hagerty & Sullivan, struck; plant shut down.

Reading. In January, Monroe Shoe Co. removed to Marblehead. **April.** Young & Co., leather shoe lacings, removed from Weymouth to this place. **May.** Brown Shoe Co. succeeded by Richardson & Ford. **June.** George M. Coburn & Co., shoes, removed to Somersworth, N. H. — E. B. Richardson of Stoneham began manufacture of children's shoes in factory vacated by G. M. Coburn & Co. — Patents granted to Henry K. Austin on flexible coupling for conduits and to James A. Horton on sole pressing machine.

August. Hamilton Hay of Stoneham leased E. B. Richardson's factory and moved to this place. **October.** Patent granted to William C. Collyer on sewing machine for lasting boots or shoes. — Hay & Chase established manufacture of shoes.

Revere. In February, patent granted to Richard A. Brine on metal punching machine; in April, to Frederic Williams on device for preventing refilling of bottles; in May, to Benjamin Nichols on movable advertising sign. **June.** Patent granted to Howard D. Sawyer on heating apparatus. — Factory of H. H. Tilton & Co., fireworks, destroyed by explosion and fire.

Richmond. In April, Richmond Iron Works resumed operations after continued idleness.

Rockland. In April, license to manufacture fireworks refused to Archibald & Co.; in June, firm decided to remove to Hanover. **July.** Rice & Hutchins leased Charles Torrey factory in order to enlarge capacity. **September.** Goodyear stitchers and sole fasteners at factories of Rice & Hutchins and E. T. Wright & Co. struck; Rice & Hutchins shut down; E. T. Wright & Co. signed agreement and strike declared off. **December.** Gordon Mann established manufacture of rugs from skins. — French, Shriner, & Urner, shoes, enlarged plant by excavating basement.

Rockport. In May, factory of Cape Ann Oil Clothes Co. damaged by fire; in August, second fire occurred. **September.** Patent granted to Frank Scripture on dumping or discharging device.

Rowe. In February, strike for shorter hours and increased pay occurred at works of Davis Sulphur Ore Co.

Rowley. In June, D. N. Prime Shoe Co. succeeded by A. B. Noyes & Co. **October.** L. T. Bradstreet invented device by which ordinary seats in railroad cars could be converted into sleeping berths.

Royalston. In December, George Whitney, retired woollen goods manufacturer, died, 80 years.

Russell. In March, Woronoco Paper Co. organized and leased plant; capital stock, \$50,000. **May.** Textile Mill started up machinery for first time; 30 hands employed. **July.** Blandford Brick & Tile Co. began erection of new building, 100 x 150 feet, two stories.

Rutland. In March, Lakeville Woollen Co. resumed operations after idleness of several weeks.

SALEM. In January, patent granted to Benjamin F. Mayo on heel trimming machine. — P. Creedon & Co., counters, added new machinery.

February. Dugan & Burke established manufacture of shoes. — Patent granted to Alfred A. Hunting on apparatus for drying paper. — M. Shortell & Son, shoes, reduced wages.

March. Following patents granted: Darius B. Hanscom, ladder-gripping attachment for shoes; William E. Allen, spinning machine; and Dr. A. Migneault, Louis Joncas, and F. X. Genereux, collapsible umbrella. — Burke-Dugan Co. incorporated; capital stock, \$5,000. — Naumkeag Steam Cotton Co. resumed full time. — M. Robson Leather Co. damaged by fire. — Chadwick Lead Works destroyed by fire; to be rebuilt; contract let in April.

May. Locke Regulator Co. erected new foundry building. — Dr. A. Migneault and others decided to manufacture recently patented folding umbrella. — C. S. Fuller & Co., shoes, shut down cutting and stitching departments indefinitely. — Carpenters employed on certain building struck.

June. Patent granted to Albert F. Jones on machine for stretching leather. — John J. Connolly established manufacture of shoes. — Naumkeag Steam Cotton Co. reduced running time to four days per week. — Laborers employed on street railway struck for increase in wages; settled.

July. Patent granted to Arthur S. Lang on bicycle support. — D. D. Frothingham, suspender trimmings, began erection of new factory. — West India Fibre Co. made plans for erection of new building to double capacity of plant. — C. R. Brainerd & Co., morocco,

added new machines. — P. Creedon & Co., counters, built addition. — Time increased to full at shops of Boston & Maine Railroad. — Heffernan & Son, shoes, reduced wages. — Naumkeag Steam Cotton Co. announced shutdown.

August. John Turner established manufacture of shoes. — Naumkeag Steam Cotton Co. shut down for two weeks and resumed on short time; later, increased to full time. — Laborers employed by New England Telegraph & Telephone Co. in laying a conduit struck for increase in pay and reduction in hours; settled by compromise.

September. James B. Dugan withdrew from Burke-Dugan Shoe Manufacturing Co.; business continued under same name. — Richard Quirk, shoe manufacturer, died.

October. Patent granted to William Martin on railway gate. — Naumkeag Steam Cotton Co. started on full time in all departments and added new carding machines. — L. G. Straw & Co., shoes, ran overtime.

November. Shoe manufacturing business of B. E. Cole & Co. continued by J. Brown & Sons. — J. H. Quirk, shoes, succeeded to business of Richard Quirk (deceased). — Michael C. Barry purchased printing plant formerly conducted by Barry & Lufkin; style changed to Barry Printing Co. — P. Creedon & Co. added new engine of 20 horse power.

December. Joseph S. Bradley admitted as special partner with Arthur T. Way, leather; no change in style. — Naumkeag Steam Cotton Co. announced a 10 per cent reduction.

Saugus. In May, patent granted to Patrick H. Walsh on stop motion for woollen cards.

Selkuate. In February, patent granted to Ethan A. Rich on tire bolt wrench.

Sharon. In July, Sharon Nail Co. started up new factory.

Sheffield. In September, saw and grist mill of Wilcox Bros. damaged by fire.

Shelburne. In February, Lamson & Goodnow Manufacturing Co., cutlery, increased running time to full and ran nights. — Mayhew and Wilkins, silk, ran overtime. *March.* Portion of plant of Mayhew Silk Co. sold; machinery removed. *June.* Peg factory of J. R. Foster shut down for annual summer vacation. — Lamson & Goodnow Manufacturing Co. shut down for inventory and repairs. *August.* Peg factory of J. R. Foster resumed operations; in December, suspended temporarily on account of scarcity of wood.

Shirley. In January, plant of Shirley Woollen Co. leased by F. D. Weeks and started up; in February, new water wheel added. *April.* Fredonia Mill of Samson Cordage Works destroyed by fire; contract let for new storehouse; of wood, 50 x 83 feet, one story; erection begun in June. *August.* Shirley Woollen Co. ran nights. — Samson Cordage Works shut down for repairs and resumed. *September.* Shirley Woollen Co. added new engine. *October.* C. A. Edgarton Manufacturing Co. ran overtime and Shirley Woollen Co. ran nights.

Shrewsbury. In May, strike of Italian laborers occurred. *July.* C. O. Greene & Co., curriers, shut down indefinitely for repairs.

Somerset. In August, Somerset Potters Works started up on full time.

SOMERVILLE. In January, following patents were granted: Joseph E. Crisp, tack-driving machine; Berton H. Fogg, bicycle; George Voelker, combined stool and bicycle saddle; and Thomas R. Ferrall, roller bearing. — Joseph A. Chabot, safe manufacturer, died, aged 64 years. *February.* Patent granted to William M. Barber on hot-water heater and to James H. Butler on adjustable support for school furniture. — Building for carriage manufacturing erected; of wood, 47 x 50 feet, three stories. *March.* Patent granted to William Vogler on saddle pad and to John Ashworth on crocheting machine. — Abraham Barnett, cigar manufacturer, died, aged 67 years. *April.* Patent granted to Erastus Woodward on nail raceway and to James H. Woodbury on shoe holder. — Vinegar factory of Amos Haynes damaged by fire. *May.* Patent granted to Peter Forg on bicycle hanger and to William Barber on furnace grate. — Ingalls H. Brown, manufacturer of mouldings, died. *June.* Patents granted as follows: William E. Ela, extension furniture for printers; William B. Turner, machine for treating hides and leather; and Sherman W. Ladd, lasting machine; in July, to James R. Hopkins and R. S. Wright, helmet; in August, to William H. Barber, radiator; in September, to Edwin E. Angell, apparatus for branding checks, and to

Edward L. Orcutt, electric safety appliance for railways; in October, to Clinton A. Patten, mowing machine. *November.* Albert E. Hughes, manufacturer of show cases, died, aged 66 years. *December.* Patents granted: Burton W. Hill, steam trap; Edward O. Burrows, heating and ventilating apparatus; and Charles P. Dyer, friction pivot for mirrors or transoms.

Southborough. In June, Cordaville Woollen Co. started up on full time.

Southbridge. In January, Richards Manufacturing Co. succeeded Stephen Richards & Son, cutlery; decided to enlarge works and start up. *February.* Strike occurred in grinding department at plant of American Optical Co. on account of dissatisfaction with new wage scale. *April.* Hamilton Woollen Co. began running on summer schedule. — Southbridge Optical Co. decided to build addition and put in new engine. *May.* Central Mills Co., cottons, reduced force and shut down portion of plant; in June, ordered new machinery and started up card room. *July.* Southbridge Optical Co. shut down for two weeks to allow engine to be put in position. — Central Mills Co. set up 50 additional looms. *August.* Hamilton Woollen Co. started up 137 looms which had been idle for three years. — Richards Cutlery & Optical Manufacturing Co. began erection of new addition to plant, 25 x 70 feet, two stories. *September.* Southbridge Gas and Electric Co. made alterations in plant and began erection of addition, 15 x 30 feet. *October.* Southbridge Printing Co. added new eight-color printing machine. — Foley & Hagerty established manufacture of knit hosiery. — American Optical Co. ran overtime.

South Hadley. In February, patent granted to Charles H. Bellamy on bicycle. *June.* Patent granted to William D. Nichols on sheet-adjusting device for folding machines. — Hampshire Paper Co. shut down for repairs. *August.* Plant of Glasgow Manufacturing Co. offered for sale at auction.

Spencer. In January, Spencer Woollen Mills Co. ran nights. — Massasoit Knitting Co. resumed operations. — Isaac Prouty & Co., shoes, reduced force; in February, increased. *February.* Patent granted to Charles N. Prouty on boot. — Massasoit Knitting Co. shut down temporarily for lack of material. — J. E. Bacon & Co., shoes, ran on short time. — Portion of plant of Spencer Woollen Mills Co. shut down temporarily. *April.* Isaac Prouty & Co. resumed full time. *May.* Spencer Wire Co. ran double time with two sets of employes. — Massasoit Knitting Co. shut down on account of lack of orders; in June, resumed operations. *July.* Dufton Bros. started up portion of Westville Woollen Mill. — Spencer Paper Box Co. received order for 50,000 folding egg boxes, a novelty originated by the company. — Isaac Prouty & Co. made improvements in boiler plant. — Patent granted to Elbert L. Steele and L. W. Rich on paper box. *August.* George F. Sargent established manufacture of paper boxes. — Isaac Prouty & Co., shoes, introduced new attachment to horn-pegging machine, the invention of P. R. Conlon. — Giving way of dam at Westville Woollen Mill caused temporary suspension; repairs made and mill started up in full. — Spencer Wire Co. reduced wages. *October.* Newton Darling started up "Middle Mill" and purchased "Red Mill." — H. S. Green, underwear, added machines and increased force. — Nipmuc Paper Box Co. ran nights. *November.* Isaac Prouty & Co. increased force and ran on ten-hour time. — Newton Darling made repairs on dam and lower mill. — Spencer Wire Co. ran nights. *December.* Spencer Woollen Mills Co. increased force and ran nights. — J. E. Bacon & Co. resumed full time. — Isaac Prouty & Co. increased wages. — H. O. Glidden, lasts, made arrangements for closing out business.

SPRINGFIELD. In January, Stebbins Manufacturing Co. began manufacture of wooden bicycle frames. — Hodges Fibre Carpet Co. ran overtime. — Patent granted to Joseph Peppin on ice planer and to John F. Barker on gas burner. — Luther E. Sage, formerly woollen goods manufacturer, died, aged 80 years.

February. Hodges Fibre Carpet Co. added 34 new looms and other machinery. — Patents granted to William A. J. Schmelzinger on carpet cleaner, to Henry W. Clapp on road vehicle, and to Asa J. Freeman on track-sanding device.

March. Patents granted to Frank W. Baum on backing-up press for electrotypes, to Charles E. Van Norman on milling machine, and to Thomas D. Millea on stop device for engines. — Firm name of plant of George M. Hendee, bicycles, changed to Hendee & Nelson Manufacturing Co. — William A. Hennessey, inventor and manufacturer of "Hennessey triple-draught tubular boiler," died, aged 65 years.

April. Following patents granted: Richard H. Smith and W. F. Tripp, hand-printing device; George A. Owen, switch device; and James H. Bullard, bicycle brake.

—Wason Manufacturing Co. railroad cars, ran overtime.—Employés of Highland and Springfield Breweries struck for reduction in hours of labor.

May. Martin Machine and Mattress Co. opened workrooms for the manufacture of mattresses by machinery; the machine used being the invention of G. F. Martin.—Money subscribed and land purchased for the erection of factory building for new company composed of Taber Art Co. of New Bedford and Prang Art Co. of Boston.—Industrial Cycle Co. increased space and ran nights.—Patents granted to Robert M. Keating on ball-bearing device and to Miles Smith on scythe snath fastener.

June. Patents granted as follows: Walter S. Mulligan, portable refrigerating case; James F. Duryea, motor vehicle; Louis G. H. Kinsman, bicycle; John Stromvall, safety valve and gauge cock; and Alpha O. Very, tandem bicycle-steering device.—Plans prepared for the erection of factory for Taber-Prang Art Co.—Wason Manufacturing Co. began manufacture of new machine, the invention of Henry Pierson, designed for use on roadways in keeping macadam paving in condition between rails.—Gilbert & Barker Manufacturing Co., gas machinery, shut down on account of dull trade.

July. Patent granted to David C. Sweet on car wheel grinding mechanism.—Portion of machinery of Natick Underwear Co. arrived.—Full time resumed at repair shops of Boston & Maine Railroad.—Hutchins Manufacturing Co., musical instruments, shipped aluminum mandolins to Scotland.—Smith & Wesson, revolvers, shut down for repairs.—Brick manufacturing plant of John O. Leary damaged by fire.

August. Patents granted to Charles E. Van Norman on milling machine and to Louis E. Watkins on electric railway system.—Taber-Prang Art Co. organized.

September. Patents granted to Alfred Birney on paper-box machine and to N. C. Bushey, D. Rioux, and N. L. Byron on switch-operating device for electric cars.—Springfield Brewing Co. voted to enlarge plant.—Wason Manufacturing Co. shut down 10 days for vacation.

October. Patent granted to Amenzio Griffith on machine for stuffing mattresses.—Brooks Bank Note Co. of Boston decided to remove to this place.—Planing mill of Day & Jobson Co. damaged by fire.

November. Patents granted to Lemuel C. Kendall on freight car, to Everett H. Barney on skate, and to Philip B. Alexander on machine for turning lock seams on sheet metal conductors.—Strike occurred at plant of National Needle Co.

December. Patents granted to George O. Gridley on anti-friction bearing, to Marcel M. Tremblay on switch-operating mechanism for cars, to Charles R. Grenter on mechanical stoker, and to Walter D. Stanton on electrically operated switch.—Efforts made to establish silk manufacturing plant.

Sterling. In May, Edward W. Burpee, pioneer chair manufacturer, died, aged 83 years.

Stockbridge. In February, patent granted to Miles E. Dunbar on folding bicycle crate; in August, to Stephen D. Field on electric railway system. *November.* Steps taken to establish electric plant for furnishing power.

Stoneham. In January, A. E. Mann & Co., shoes, shut down and decided to discontinue business.—Lockout occurred at shoe factory of T. H. Jones; business resumed as a "free shop."—Francis F. Emery, retired shoe manufacturer, died, aged 67 years. *March.* Injunction served on former employés of T. H. Jones. *May.* H. H. Mawhinney & Co. incorporated as H. H. Mawhinney Co.—E. B. Richardson, shoes, removed business from this place.—T. H. Jones shut down temporarily for repairs on boiler; in June, labor troubles ended. *July.* R. Henry Boyce, heels, purchased Hamilton Hay factory and moved business to that location.—Mrs. S. W. Kimball, shoes, sold plant to G. W. Turner & Co. *August.* E. H. Morrill & Co. established manufacture of heels.—The E. R. Lothrop Tip Co. succeeded by George N. Green.—Hamilton Hay, shoes, removed to Reading. *September.* Henry R. Boyce & Son, heels, placed an electric light plant in factory.

Stoughton. In February, patent granted to Joseph Rockwell on folding music rack.—J. & H. Fitzpatrick, shoes, shut down indefinitely on account of refusal of employés to accept reduced price list. *May.* Patent granted to Sanford E. Capen on clothes drier.—Charles E. Tenney, shoe manufacturer, died, aged 55 years; business purchased by C. F. Tenney and C. S. Upham. *September.* Patent granted to Francis E. Benton on last block fastener.—G. F. Chapman made arrangements for the manufacture of bicycles.—Lasters at factory of J. & H. Fitzpatrick struck.—Operators on Chase machines at

factories of Upham Bros. and Charles Tenney & Sons struck. *November.* Patent granted to Lois Cooke on clothes drainer for wash boilers.

Stow. In February, C. W. and A. D. Gleason, woollens, added new looms and pickers; in July, shut down for repairs; in August, resumed; in November, made improvements in water power.

Sturbridge. In February, patent granted to Oscar B. Truesdell on loom shuttle. *July.* Noah D. Ladd of N. D. Ladd & Son, shoe tools, died. *December.* Fiskdale Mills, cottons, announced a reduction in wages.

Sutton. In May, Sutton Manufacturing Co., cottons, shut down indefinitely. *June.* Patent granted to Samuel A. Prescott on machine for cleaning old bricks. *December.* Mule Room No. 3 at Manchaug Mills, cottons, damaged by fire.

Swampscott. In January, patent granted to Frank Berry on safety fender for street cars; in April, to Frank F. Stanley on sole-sewing machine. *August.* C. Edwin Smith, shoes, removed to Lynn.—Patent granted to Albert F. Chandler on welt trimmer. *September.* Patent granted to Elihu Thomson on electric measuring instrument.

TAUNTON. In January, Weir Stove Co. decided to enlarge plant. *February.* Patent granted to Winfield S. Huson on registering-mechanism for printing presses.—Elizabeth Poole Mills, cottons, reduced running time to three days per week. *March.* Patent granted to John T. Meats on brake-mechanism for looms.—Cohannet Mills, cottons, increased running time. *April.* Patent granted to Napoleon Lemaire on picker strap for looms and to Alfred F. Baillies on oar lock.—Taunton Nickel Plating Co. set up new machinery for manufacture of steel rims for stoves, a new industry.—Factory of Peck & White, carriages, damaged by fire. *May.* Shoe factory formerly occupied by D. D. White Shoe Co. sold at auction.—City of Taunton purchased plant of Electric Lighting Co.—Patent granted to William R. Billings and E. C. Collins on expansion joint for steam pipes.—Canoe River Mills, cottons, damaged by fire and saw mill of John W. Lincoln totally destroyed. *June.* Money subscribed for erection of new mill. *July.* Patent granted to Edward C. Collins on sand box for electric cars.—The Speed Controller Appliance Co. formed; capital stock, \$10,000.—D. D. White shoe factory started up under charge of Charles Hewitt. *August.* Patents granted to Stephen M. Hamlin on lever screw for spinning frames and to William R. Park on apparatus for supplying oil to boilers.—Poole, Roche, & Co., silverware, made plans for addition to plant; 60 x 140 feet, two stories.—Mason Machine Works resumed full time.—Taunton Locomotive Manufacturing Co. reduced running time to 40 hours.—Elizabeth Poole Mills, cottons, shut down for two weeks. *September.* Patents granted to Winfield S. Huson on registering and tripping mechanism for printing presses and to William G. Hannah on marine-engine governor.—Reed & Barton, silverware, increased running time in portion of plant.—Nemasket Mills, cotton yarns, increased running time from four to six days. *October.* Patent granted to Charles H. Worthen on sail slide.—Cohannet Mills resumed operations.—Atlas Tack Corporation removed machinery from Fairhaven to works in this place. *November.* Manufacture of handkerchiefs established.—Patents granted to Berthold Huber on printing press and to Willis K. Hodgman on registering apparatus for printing presses. *December.* Patent granted to William McAusland on device for stamping or shaping metallic articles.—Universal Loom Co. purchased factory of E. C. Morris Safe Co., at Hyde Park, and began removal of business to that place.—Taunton Dye Works & Bleaching Co. added new machinery.—Corr Manufacturing Co. announced a reduction in wages.—John W. Hart of J. W. Hart & Co., bricks, died, aged 71 years.

Templeton. In January, Andrew M. Holman, of Holman & Harris, wooden goods, died, aged 52 years. *April.* Holman & Harris ran overtime.—J. M. Greenwood & Co., baby carriages, shut down indefinitely. *November.* Patent granted to Clarence C. Stirling on electric arc lamp.

Topsfield. In February, factory fitted up for the manufacture of shoes by Frank Titus and Augustus Frame. *September.* Arrangements made to manufacture shoes by Charles Frye and William Wildes; in October, began operations under style of Frye & Wildes.

Townsend. In October, Fessenden's saw mill destroyed by fire. *December.* Plant of Townsend Furniture & Novelty Co. destroyed by fire.

Tyngsborough. In December, patent granted to Channing Whitaker on grinding-mechanism for flats of traveling flat carding engines.

Upton. In May, Nelson & Ladow, straw goods, reduced force. *July.* William Knowlton & Sons, straw goods, built fire-proof building for the storage of combustible chemicals and installed fire extinguishing apparatus in plant. *August.* Nelson & Ladow started up. — Daniel W. Knowlton, of William Knowlton & Sons, died at Newton, aged 51 years. *October.* Nelson & Ladow increased capacity by addition to bleaching yards.

Uxbridge. In January, Calumet Woollen Co. shut down. *March.* Spoolers at Hecla mill struck for advance in wages; granted and work resumed. *April.* Repairs made on woollen mill of Davis & Spencer preparatory to starting up plant. *May.* D. Morey Lee began erection of new shoddy mill; of wood, 28 x 100 feet, two stories; to replace one destroyed by fire in 1896. — Running time reduced to five days per week at Hecla Woollen Mill. — Woollen mill of Charles C. Capron damaged by fire. *July.* Hecla Woollen Mill shut down temporarily and resumed. *August.* Calumet and Hecla Mills ran nights. — Capron Woollen Co. shut down for a few days on account of low water. *October.* Richard Sayles & Co., woollens, increased to full time. — Samuel W. Scott, retired woollen manufacturer, died, aged 78 years. *December.* Capron Woollen Co. added new spinning frames. — Stockhouse of Calumet and Hecla Mills Co. destroyed by fire.

Wakefield. In January, patent granted to James H. Calkins on means for repairing pneumatic tires. *February.* Wakefield Rattan Co. and Heywood Bros. & Co. of Gardner consolidated as Heywood Bros. and Wakefield Co.; incorporated; capital stock, \$6,000,000; new office building erected. *April.* Patent granted to Fred H. Henry on car seat. *June.* Wakefield & Stoneham Street Railway Co. erected repair shop, 30 x 100 feet. — Patent granted to Andrew J. Lloyd on instrument for testing lenses. *September.* Harvard Knitting Co. began erection of factory; of brick, 50 x 182 feet, three stories. *December.* Patent granted to Elmer H. Cram on curtain rod bracket. — New factory of Harvard Knitting Co. completed.

Wales. In May, employes of Excelsior Woollen Co. struck because of wages withheld; temporary shutdown occurred; settled and work resumed; in June, indefinite shutdown occurred; in August, started up to work off stock on hand; in November, changed name of plant to Golden Rod Woollen Mills; improvements and additions made.

Walpole. In May, Windmill Light & Power Co. began erection of factory; of wood, 45 x 80 feet, two stories. *November.* Bleaching and dyeing plant of S. Gray & Co. incorporated as S. Gray Co.; capital stock, \$30,000. *December.* Patent granted to George R. Wyman on paper box.

WALTHAM. In January, Davis & Farnum Manufacturing Co., metallic goods, reduced wages.

February. Patent granted to Clarence E. Fletcher on car fender. — Boston Manufacturing Co., cottons, resumed operations after partial idleness of several months. — American Waltham Watch Co. shut down for one week for stock taking and reduced running time to five days per week. — Davis & Farnum Manufacturing Co. shut down on account of dull trade, being the first shutdown since the firm started in 1844.

March. Boston Manufacturing Co. increased force and output. — J. L. Thompson Manufacturing Co., buckles, and E. W. Lane, church organs, ran overtime. — American Waltham Watch Co. shut down for one week and reduced force; resumed under new system; in April, made further reductions in force.

April. Patent granted to Judson L. Thomson on saddle pad fastening. — Plans made for erection of new plant for Boston Bridge Co.; main building, 257 x 416 feet.

May. Patent granted to Abraham Humberly on ventilating fan; in June, to Duane H. Church on drilling machine.

July. Waltham Manufacturing Co. made experiments in horseless carriages. — American Watch Tool Co. shut down for vacation.

August. Patents granted to Judson L. Thomson on hand-riveting tool and guide anvil and to Eppa H. Ryan on lappet loom. — Boston Manufacturing Co. placed upon market silk goods woven on cotton looms by cotton hands. — Waltham Electric Clock Co. enlarged quarters. — Stark Machine Co. added new machinery. — American Waltham

Watch Co. resumed on full time after suspension for vacation. — O'Hara Waltham Dial Co. increased from four days per week to full time. — About 20 weavers employed by Boston Manufacturing Co. and moulders at foundry of Davis & Farnum Manufacturing Co. went on strike.

September. Patent granted to Charles R. Hill on leaf-turning apparatus. — Strike of moulders at foundry of Davis & Farnum Manufacturing Co. declared off.

October. Patent granted to Herbert W. Pierce on transom lifter.

December. Patent granted to Edward S. Amrock on portable nursery. — Hill-Whitney Aluminum Co. removed machinery from Vermont to establish manufacture of kitchen utensils in this place. — American Waltham Watch Co. shut down for one week. — Foundry of Davis & Farnum Manufacturing Co. damaged by fire.

Ware. In May, patent granted to Frederic E. Pomeroy on metallic frame for buildings. *July.* Chas. A. Stevens & Co., woollens, shut down for stock taking and resumed. — Otis Co., cottons, shut down; in August, resumed operations. *November.* Chas. A. Stevens & Co. added new mules, and George H. Gilbert Manufacturing Co. added new press and transferred fancy looms from Hardwick to this plant. — Otis Co. ordered high-speed looms.

Wareham. In April, George F. Blake, Jr., iron and steel goods, reduced force and wages. *June.* Patent granted to Joseph S. Washburn on cranberry picker.

Warren. In February, Warren Steam Pump Co. organized; capital stock, \$50,000. — George F. Blake, Manufacturing Co. began removal of Knowles Steam Pump Works to Cambridge. *March.* Stock subscribed for establishment of new industry; the manufacture of brass radiator valves and fittings by Belknap Valve Co. — Slater Engine Co. ran nights as did a portion of Sayles & Jenks' woollen mill. *April.* Warren Cotton Mills notified employes of indefinite shutdown. *May.* Sayles & Jenks restored wages paid previous to depression in business. — Plant secured by Warren Steam Pump Co. for manufacturing; machinery set up and office building, 17 x 19 feet, erected. — Removal of Knowles Steam Pump Works to Cambridge completed. *July.* Warren Steam Pump Co. added new machinery. *September.* Marine Machine and Conveyor Co. began the manufacture of steam steerers and elevators. *October.* Patent granted to George P. Aborn on sinking pump. — Sayles & Jenks, woollens, ran spinning and carding departments nights. *November.* Patent granted to Charles H. Burt on pile fabric loom.

Watertown. In January, Hollingsworth & Whitney Paper Co. and Union Bag and Paper Co. resumed operations. *February.* Patent granted to Ella A. Marden on car brake. — United States Arsenal ran nights. *March.* Contract awarded for erection of new foundry buildings by Walker & Pratt Manufacturing Co.; of brick and iron, 135 x 566 feet, one story; reduction of wages in mounting department. *April.* Patent granted to Retta R. Quackenbush on clothes-line adjuster. *May.* Patent granted to Charles H. Rollins on plumbing attachment. — Walker & Pratt Manufacturing Co. shut down for two weeks; in June, resumed operations. *June.* Wm. H. Perkins, formerly of Perkins & Co., flour and grain, died, aged 40 years. *September.* Hood Rubber Co. awarded contract for addition to plant, 64 x 80 feet, four stories. *October.* Picking room of Harvard Mills Co. damaged by fire.

Wayland. In January, strike occurred at shoe factory of N. C. Griffin; settled. *February.* Charles W. Dean, shoes, shut down for stock taking; in April, strike occurred; settled. *June.* Alterations made in shoe factory of Charles E. Tisdale & Co., for occupancy of new firm of Tisdale & Baker. *August.* E. M. Bent established manufacture of shoes. *November.* N. C. Griffin equipped factory with electric lights and started on ten-hour time. *December.* Charles W. Dean ran nights.

Webster. In January, H. N. Slater Manufacturing Co., cottons, ordered new machinery. — Webster Job Dye Works began operations in building formerly occupied by Webster Valley Woollen Co. *February.* New engine of 1,250 horse power arrived for new addition to plant of H. N. Slater Manufacturing Co. *March.* B. A. Corbin & Son and A. J. Bates & Co., shoes, increased force. *April.* H. N. Slater Manufacturing Co. ordered new machinery and decided to make second new addition to plant; in May, looms set up in completed addition. *July.* Plans made for new addition to plant of H. N. Slater Manufacturing Co.; of brick, 60 x 180 feet, four stories. *August.* John Chase

& Sons, woollens, made arrangements for enlargement of plant. — Contract awarded for addition to plant of H. N. Slater Manufacturing Co. *September*. L. D. Perry, woollens, made improvements in machinery. — John Chase & Sons added new machinery; in October, ran overtime; strike of weavers for restoration of wage schedule occurred; settled; in November, strike of spinners occurred for same reason; their demands were not granted. *December*. Strike occurred at factory of A. J. Bates & Co.

Wellesley. In June, patent granted to Franklin H. Gilson on separable book and to Henry D. Winter on support for lawn sprinklers.

Wendell. In January, Farley Paper Co. made repairs. *May*. Orange Knitting Co. began erection of new factory; in August, building completed and occupied. *October*. Farley Paper Co. added electric lighting plant.

Westborough. In January, George B. Brigham & Sons, shoes, shut down; resumed later. — Hunt Manufacturing Co., bicycle supplies, ran overtime. *February*. Patent granted to Jonathan A. Hunt on bicycle saddle. — Factory of T. W. Hines & Co., straw goods, shut down temporarily and resumed. — Gould & Walker, shoes, reduced force. *April*. Cycle Improvement Co. ran nights and Ariston Manufacturing Co. increased force. *July*. Efforts made to have bicycle manufacturing plant of F. W. Brigham removed from Boston to this place. *September*. Humber & Co., bicycles, increased force. *October*. Patent granted Ernest V. Gauthier on sprocket wheel. — L. A. Fairbanks and Herbert L. Warren of the Reliable Underwear Co., Worcester, made arrangements to manufacture underwear under name of Westborough Underwear Co. — Humber & Co. increased force. *November*. Patent granted to Ernest V. Gauthier on screw machine chuck. — Westborough Underwear Co. started up.

West Boylston. In April, plant of West Boylston Manufacturing Co., cottons, ran on orders; Metropolitan Water Board decided upon price to be paid for plant and agreed that location should be retained until July 1, 1900. *July*. Clarendon Mills, cottons, shut down; in August, resumed. *August*. West Boylston Manufacturing Co. and L. M. Harris Manufacturing Co. shut down temporarily and resumed. *September*. Howe, Morton, & Lovell, shoes, increased force. *October*. Clarendon Mills shut down lower weave shop.

West Brookfield. In July, McIntosh & Co., shoes, shut down temporarily; in December, shut down for inventory and repairs.

Westfield. In January, patent granted to James Lakin on vocalizing audiphone. — Foundry of H. B. Smith Co., steam heating apparatus, damaged by fire. *February*. Lozier Bicycle Co. increased force. *May*. Patent granted to Charles F. Brown on tire for bicycles. *June*. Patent granted to John W. Foster on mechanism for handling warp threads. — Grist mill operated by Woodbury & Smith destroyed by fire. *July*. New manufacturing firm, Mechanical Tire Co., established to manufacture tires of new design for carriages. — Westfield Parchment and Paper Co. formed and purchased plant for manufacture of grease proof paper. *August*. Pomeroy & Van Deusen, whips, purchased land and began erection of new building, 18 x 33 feet, three stories, for the enlargement of plant. *November*. Patent granted to John W. Foster on machine for bobbins and on ring spinning and twisting frame. — Plano-leg factory of C. N. Stimpson & Co. destroyed by fire. *December*. William Warren Thread Co. made plans for new building for enlargement of plant.

Westford. In November, patent granted to Frank L. Furbish on bagging machine. — John W. Abbott of Abbott & Co., woollens, died, aged 63 years.

Westminster. In October, chair factory of Artemus Merriam destroyed by fire.

West Newbury. In January, patent granted Gilman W. Brown on apparatus for stopping engines. *April*. Breaking-down of machine at shoe factory of W. B. Chaplin caused temporary suspension; force reduced on account of lack of orders. *May*. S. C. Noyes & Co., combs, shut down temporarily for repairs; in November, a similar shutdown occurred. *December*. W. B. Chaplin reduced wages on special order; shutdown accepted by employes.

Weston. In April, patent granted to Francis Blake on label for trees; in May, to Herman E. Hobbs on electro-pneumatic organ action.

West Springfield. In January, patent granted to John H. Cook on anchor bolt bushing. — Mitteneague Paper Co. built addition of brick, two stories. *August.* S. Abercrombie invented an ash-sifting device. *October.* F. L. Worthy & Co. began erection of three story addition to grist mill.

West Stockbridge. In January, patent granted to Charles E. Bostwick on wagon gear.

Weymouth. In April, Young & Co., leather shoe lacings, removed to Reading. *May.* Frederic Cate, clothing, decided to build addition and increase output. *July.* John P. Lovell, of the John P. Lovell Arms Co., died at Cottage City, aged 77 years. *August.* John Carroll & Sons, shoes, resumed operations after shutdown of several weeks. — Factory of T. J. Evans & Co. destroyed by fire. *September.* M. C. Dizer & Co. decided to increase output by manufacturing finer grade of shoes. — T. J. Evans & Co. secured quarters and resumed operations. — Lasters on Chase machines at factory of H. B. Reed & Co. and sole fasteners at factory of M. C. Dizer & Co. struck. *October.* Frederic Cate, cotton clothing, began erection of addition to factory. *November.* Gordon - Kiley Co. established manufacture of shoes; incorporated; capital stock, \$10,000. — A. F. Howes received patent on portable aluminum house capable of housing four people, to be used in camping out. — J. W. Hart of J. W. Hart & Co., shoes, died.

Whitman. In January, patent granted to Benjamin S. Atwood on nail-feeding chuck. — Commonwealth Shoe & Leather Co. decided to remove to Maine. — Davis Gurney, retired shoe manufacturer, died, aged 85 years. *February.* L. C. Bliss & Co., shoes, removed from Brockton to this place. *June.* Patent granted to Henry Hill on dust guard for sprockets and chains of bicycles. — Atlas Tack Corporation ordered final closing of Whitman plant. *August.* L. C. Bliss & Co. shut down temporarily on account of accumulation of goods and in order to make repairs. *September.* Patent granted to Albert H. Brigham on apparatus for heading nails or tacks. — Strike of lasters on Chase machines occurred in factories of Commonwealth Shoe & Leather Co., Old Colony Boot & Shoe Co., United States Shoe & Leather Co., and L. C. Bliss & Co.; at factories of Old Colony and United States Cos. lasters resumed work by hand method. — Sole fasteners at factory of L. C. Bliss & Co. operating Goodyear machines, struck; firm shut down; in October, resumed work. *October.* E. Phillips & Sons, Hanover, tacks, purchased unoccupied shoe factory. — Jenkins Bros. & Co., steel shanks and instruments, added machinery. *November.* Lasters employed by Old Colony Boot & Shoe Co. struck to bring about an equalization of prices. *December.* John R. Ellis established manufacture of heels. — David B. Gurney, tacks, accepted new price list submitted by labor unions.

Williamsburg. In February, Haydenville Manufacturing Co., brass goods, reduced wages on account of depression in business. — Lumber mill of G. M. Bradford destroyed by fire. *April.* Coremakers at plant of Haydenville Manufacturing Co. struck because of reduction in wages; in May, shut down for inventory and resumed. *May.* Nonotuck Silk Co. ran on short time. *June.* Hampshire Pearl Button Co. established manufacture in this place. *August.* Picker-room of Hampshire Woollen Mills Co. damaged by fire. *December.* Strike against reduction occurred at factory of Hampshire Pearl Button Co.; settled.

Williamstown. In January, Boston Finishing Co. resumed operations. *March.* Williamstown Manufacturing Co., cottons, changed from manufacture of common cloth to fine print goods; in September, began erection of new dam.

Winchendon. In January, Morton E. Converse & Son rebuilt toy and rattan factory destroyed by fire in June, 1896. — William Brown & Son and E. Murdock & Co., wooden goods, built addition. *March.* Patent granted to Baxter D. Whitney on expandable reamer. *July.* Partnership formed between Wilder P. Clark and H. O. Taft under title of Winchendon Spool & Bobbin Co.

Winchester. In February, Whitney Machine Co. produced new machine for leather manufacture. — Milan Morse, retired leather manufacturer, died, aged 78 years. *March.* Patent granted to Louis Goddu on shoe sewing machine; in April, on slotting machine

and on machine for spirally impressing wire. *May.* Patent granted to Thomas H. Ambrose on metal button cleaning shield. — Currying shop of Blank Bros. destroyed by fire. *June.* Patent granted to George Goddu on malling machine; in August, to Edward P. Noyes on cutting-off mechanism. *November.* Beggs & Cobb, tanners, began erection of new shop for currying fancy leather; 50 x 150 feet, four stories. — Patent granted to Napoleon and George Goddu on sewing machine for lasting boots or shoes.

Winthrop. In January, patent granted to Edward Fales on furnace and heater. *February.* Patent granted to James M. Blaisdell on device for feeding fibre to fibre-treating machines; in June, to George H. Barney on ventilating fan.

WOBURN. In February, patent granted to Edward B. Parkhurst on boiler furnace. *April.* Stephen Dow & Co. incorporated as Stephen Dow Co. — James Robertson, tanner, built addition to plant. *May.* Beggs & Cobb, tanners, shut down portion of plant. *July.* James Skinner Leather Co. decided to enlarge plant. *September.* Watauga Tanning Co. made improvements in plant. *November.* J. T. Freeman & Co., machinery, produced new pebbling and rolling jack. *December.* Waterproof cloth factory of N. Boynton & Co. damaged by fire.

WORCESTER. In January, R. L. Golbert hired former Mawhinney factory and began the manufacture of lasts. — Samuel Winslow Skate Manufacturing Co. built addition to factory; of brick and iron, 24 x 50 feet, four stories. — Bowler Bros., brewers, erected addition to plant; of brick and iron, 40 x 60 feet, one story. — King Self-Measuring Oil Elevator Co. of Providence, R. I. decided to remove plant to this place. — William F. Hogg admitted as partner in firm of Worcester Carpet Co. — James H. Whittle invented rotary coal-ash-sifter and made arrangements for its manufacture. — Following patents granted: Ralph L. Morgan, gas producer; George C. Moore, pneumatic tire; Henry G. Barr, cutter and reamer grinder; Andrew Fryberg, break-down firearm; Ira G. Blake, time lock; and Theodore P. Brown, automatic organ. — Waverly Shoe Co. decided to remove to New Hampshire.

February. Crompton Loom Works and Knowles Loom Works consolidated as Crompton & Knowles Loom Co.; capital stock, \$3,000,000. — Globe Foundry Co. organized; capital stock, \$6,500. — Foundation at plant of Worcester Brewing Co. completed. — E. J. Somers & Co., tacks, increased space. — Prentice Bros., machinists, purchased land for addition to plant. — Patent granted to John E. Swanestrom on rotary spade shovel and to George H. Coates on hair clipper. — Waverly Shoe Co. removed to New Hampshire.

March. Marden & Drury, heels, succeeded by Drury Heel Co. — Plant of J. F. Fowkes Manufacturing Co., saddle pads and specialties, changed owners. — Crompton & Knowles Loom Co. purchased plant of Star Foundry Co.; number of employes reduced. — Patents granted as follows: William Pathie, sheet metal sign; Tracy Murdock, belt stretching machine; Francis V. Davis, lamp burner; Charles H. Thurston, bicycle support; and Scott F. Whittaker, canopy for bicycles. — John Whittaker, reed manufacturer, died, aged 48 years. — Factories of Thayer & Co., shirts, and Clifford & Johnson, upholsterers, destroyed by fire. — Filers in employ of Fowler & Co., curtain fixtures, and weavers of Curtis Manufacturing Co., woollens, struck.

April. Patents granted as follows: John P. Coghlin, junction-box coupling for electric wire conduits; Hercule Vigneault, power hammer; David McTaggart, warp beaming machine; and George L. Brownell, twisting machine. — Sterling Specialty Co. established new industry, the manufacture of small articles of household convenience, newly invented. — Gilbert Loom Co. shipped looms to England. — Washburn & Moen Manufacturing Co., wire, decided to put up new building and Logan, Swift, & Brigham Envelope Co. decided to enlarge plant by addition, 43 x 73 feet, five stories. — Plant of Hubley & Co., metallic goods, destroyed by fire.

May. L. D. Thayer Manufacturing Co. began manufacture of silk ribbon. — Rogers-Young Co., confectionery, began manufacturing in new plant. — Adams & Powers, new firm, established manufacture of sashes, doors, and blinds. — J. W. Loring & Son, woodworkers, and Marcus Mason & Co., coffee-harvesting machinery, increased space. — Following patents granted: Helen E. Buck, clothes drier; Martin Byre, gun frame for drop-down firearms; and Thomas C. Nixon, pipe coupling. — Charles Davis, president of Southgate Woollen Co., died at St. Augustine, Fla., aged 62 years. — Tatnuck Woollen Mill destroyed by fire.

June. Permit granted to Speirs Manufacturing Co. to erect addition to plant, 45 x 100 feet, three stories. — Lapham Woollen Co. incorporated; capital stock, \$10,000. — Capital stock of Logan, Swift, & Brigham Envelope Co. increased from \$100,000 to \$160,000.

— Patent granted to Carroll W. Dodge on dental polishing disk and to August Lundberg on book support. — Rendering works of John G. Jefferds destroyed by fire. — Employés of Worcester Cycle Manufacturing Co. struck on account of reduction in wages.

July. Following patents granted: Horatio N. H. Lugin, apparatus for lighting interiors of buildings; John H. Bennett, branch connection for bicycle frames; Frederick H. Daniels, furnace; Victor E. Edwards, apparatus for straightening and cooling metal rods; and Henry D. and D. W. Swift, printing machine. — Hill Dryer Co. broke ground for erection of addition to factory; of brick, 30 x 75 feet, four stories. — Johnson & Bassett, spinning machines, added new machinery. — Gilbert H. Harrington, president of Harrington & Richardson Arms Co., died, aged 52 years.

August. Following patents granted: Edwin Butcher, heddle for Jacquard looms; Elbert H. Carroll, piston rod support; Arthur W. Cash, combined high pressure throttle and reducing valve; and Frederic L. Coes, wrench. — Speirs Manufacturing Co. completed addition to plant. — Gilbert Loom Co. shipped looms to England. — Strike occurred among plasterers and plumbers.

September. Patents granted to Alfred F. Smith on rough rounding and channelling machine, to Benjamin F. Luther on swinging sawing machine, and to George H. Coates on hair clipper. — James K. Rouselle established manufacture of counters. — Crompton & Knowles Loom Co. increased force. — Wright Machine Co. petitioned for dissolution of corporation.

October. Patents granted to Leroy Cook on machine for swaging iron, to Enoch Earle on stop mechanism for engine lathes, and to William H. Wiggin on electrical rail-bond. — Crompton & Knowles Loom Co. shipped looms to Canada. — Norton Emery Wheel Co. began erection of boiler and engine house; of brick, 40 x 72 feet, two stories. — Last factory of S. Porter & Co. damaged by fire.

November. Patents granted William L. Ames on die for rolling screw thread and to Albert F. Prentice on engine lathe. — A. M. Howe, dies, sold out to John J. Adams. — J. G. Jefferds and Charles A. Bartlett sold respective plants to L. B. Darling Fertilizer Co. of Pawtucket, R. I. — Charles F. Rugg, soap and candles, sold plant to G. E. Swift & Co. of Chicago, Ill. — William A. Richardson, of Harrington & Richardson Arms Co., died, aged 64 years.

December. Patents granted as follows: Edgar J. Carroll, spindle bearing; John R. Bannon, sectional steam or hot water boiler; George F. Hutchins and William D. Thompson, take-up mechanism; Theodore P. Brown, pneumatic motor for musical instruments; and Everett M. Low, envelope machine. — Permit granted to Hopeville Manufacturing Co. to build addition to plant. — Company formed to operate Beaver Brook Woollen Mills; erection of plant begun. — O. M. Savels & Co., dies, ran overtime. — Stitchers employed by Worcester Corset Co. struck because of reduction in wages.

Wrentham. In April, Chapman & Barden established manufacture of jewelry; W. F. Barden was formerly of firm of Barden, Blake, & Co. *May.* Patent granted to Rufus King on permutation padlock.

THE STATE. Returns are made from 228 cities and towns in the foregoing Chronology, as against returns made from 196 cities and towns in 1896. In the following table is presented a summary of the facts shown in the preceding pages placed in comparison with the items contained in the Industrial Chronology for 1896:

CLASSIFICATION OF CHANGES, SUSPENSIONS, FIRES, ETC.	NUMBER OF ESTABLISHMENTS REPORTING SPECIFIED CHANGES, SUSPENSIONS, FIRES, ETC.	
	1896	1897
Firms, establishments, and industries new to towns, ...	140	144
Buildings constructed during the year, ...	83	104
Machinery added to plants, ...	152	125
Other additions to plants, ...	76	74

CLASSIFICATION OF CHANGES, SUSPENSIONS, FIRES, ETC.	NUMBER OF ESTABLISHMENTS REPORTING SPECIFIED CHANGES, SUSPENSIONS, FIRES, ETC.	
	1896	1897
Addition of new class of product to manufacture, ...	11	17
New industrial corporations organized, ...	41	60
Amount of capital stock of new industrial corporations, ...	\$7,865,000	\$20,435,600
Rebuilding of burned factories, etc., ...	14	16
Removals to larger or new quarters, ...	14	65
Resumption of business after protracted shutdowns, ...	10	16
Use of important new inventions, ...	9	6
Changes from private firms to corporations, ...	12	11
Changes in firms, firm names, etc., ...	64	91
Changes in character of product, ...	12	5
Changes in character of machinery, ...	4	4
Consolidation of firms and corporations, ...	9	9
Increases in capital stock, ...	6	4
Decreases in capital stock, ...	-	1
Removals of firms and industries to Massachusetts from other States,	13	5
Removals of firms and industries from Massachusetts to other States,	7	13
Removals from one town to another in Massachusetts, ...	44	37
Increase in numbers of employes, ...	36	28
Reduction in number of employes, ...	53	19
Increase in rate of wages paid, ...	1	12
Reduction in rate of wages paid, ...	46	46
Increase in hours of labor per day or week, ...	40	46
Reduction in hours of labor per day or week, ...	138	42
Running overtime and nights on account of rush of orders, . . .	63	88
Introduction of electric lighting and power into factories, etc., .	11	11
Suspensions for vacations, ...	20	8
Suspensions for stock taking, ...	31	26
Suspensions indefinite as to duration, ...	101	32
Suspensions on account of low water, ...	2	-
Suspensions on account of high water, ...	68	7
Suspensions on account of accidents to machinery, ...	15	10
Suspensions for repairs and improvements, ...	98	57
Suspensions for curtailment of production, ...	109	20
Suspensions on account of dull trade, ...	49	19
Suspensions on account of retirement from business (no successors),	17	5
Suspensions on account of dissolution of private firms and corporations, ...	40	5
Suspensions (cause not given), ...	123	93
Strikes, ...	76	149
Establishment of "free shops,"	-	7
Auction sales of industries or plants, ...	8	8
Sales of plants in whole or in part, ...	55	44
Sales of plants to syndicates or trusts, ...	1	-
Fires during the year, ...	169	149
Plants damaged by explosions, ...	2	5
Deaths of manufacturers, ...	119	97

The character of the information contained in the above table is sufficiently explained by its contents and no extended mention is necessary. Such informa-

tion as is here given was obtained from manufacturers and from other sources. It includes all of the more important items of interest connected with the manufacturing and mechanical industries of the Commonwealth, but the information cannot be considered complete, or as covering every operation which occurred during the year. It has been undertaken as a portion of the regular work of the Department chiefly in order that its files and records may be kept in perfect condition. Our facilities will not allow us to verify each statement made or printed, and while great care has been exercised, it is quite possible that some slight errors may have crept in, yet not sufficient to alter the influence and value of the reports made.

In the following table is shown the number of suspensions as recorded in the preceding table, for the year 1897, distributed by months :

MONTHS.	CAUSES OF SUSPENSION					
	Vacations	Stock Taking	Indefinite	High Water	Accidents	Repairs and Improvements
January, ...	-	-	5	4	1	4
February, ...	-	2	2	-	-	2
March, ...	-	1	2	-	1	-
April, ...	-	1	2	-	2	1
May, ...	-	4	5	-	2	3
June, ...	1	5	5	1	-	9
July, ...	3	3	7	2	-	10
August, ...	3	-	-	-	2	13
September, ...	1	-	2	-	1	4
October, ...	-	2	-	-	-	3
November, ...	-	-	1	-	1	4
December, ...	-	8	1	-	-	4
TOTALS, ...	8	26	32	7	10	57

MONTHS.	CAUSES OF SUSPENSION—Con.					
	Curtailment	Dull Trade	Retirements	Dissolutions	Not Given	TOTALS
January, ...	-	2	1	-	5	22
February, ...	-	-	-	-	7	13
March, ...	1	-	-	-	2	7
April, ...	-	-	-	-	5	11
May, ...	-	2	-	-	8	24
June, ...	1	6	-	2	9	39
July, ...	13	7	2	-	35	82
August, ...	4	1	1	-	8	32
September, ...	-	-	-	1	3	12
October, ...	-	1	-	-	1	7
November, ...	1	-	-	2	4	13
December, ...	-	-	1	-	6	20
TOTALS, ...	20	19	5	5	93	282

The 149 fires which were reported as having occurred during the year 1897, and presented in the following table by months, are placed in comparison with the 169 fires occurring in 1896 :

MONTHS.	NUMBER OF FIRES		MONTHS.	NUMBER OF FIRES	
	1896	1897		1896	1897
January, ...	13	16	July, ...	16	7
February, ...	18	11	August, ...	16	9
March, ...	19	13	September, ...	7	7
April, ...	18	15	October, ...	8	11
May, ...	19	16	November, ...	16	10
June, ...	9	10	December, ...	10	24

